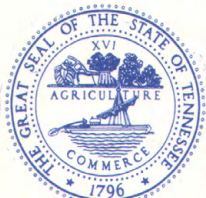
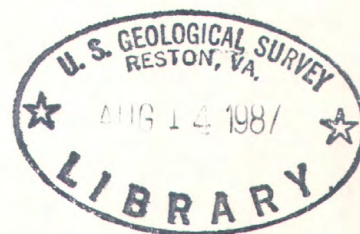


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# Water Resources Data Tennessee Water Year 1986



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT TN-86-1  
Prepared in cooperation with the Tennessee Department of  
Health and Environment, Office of Water Management; the  
Tennessee Valley Authority; and with other  
municipal, and Federal agencies



**CALENDAR FOR WATER YEAR 1986**

1985

OCTOBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
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27	28	29	30	31		

NOVEMBER

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DECEMBER

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1986

JANUARY

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MAY

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JUNE

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JULY

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AUGUST

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31						

SEPTEMBER

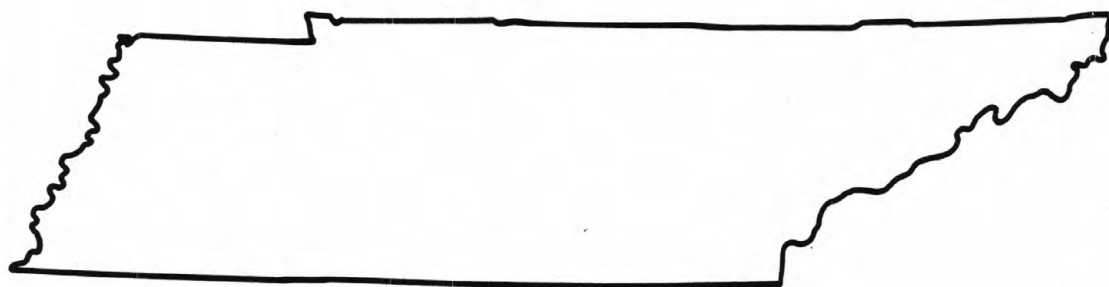
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21	22	23	24	25	26	27
28	29	30				





# Water Resources Data Tennessee Water Year 1986

by J.F. Lowery, P.H. Counts, H.L. Edmiston and F.D. Edwards



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT TN-86-1  
Prepared in cooperation with the Tennessee Department of  
Health and Environment, Office of Water Management;  
the Tennessee Valley Authority; and with other State,  
municipal, and Federal agencies.



DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, SECRETARY

U.S. GEOLOGICAL SURVEY

Dallas L. Peck, Director

For information on the water program in Tennessee write to  
District Chief, Water Resources Division  
U.S. Geological Survey  
A-413 Federal Building, U.S. Courthouse  
Nashville, Tennessee 37203

1987



## PREFACE

This volume of the annual hydrologic data report of Tennessee is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and water quality provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources.

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. The authors had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines. Most of the data were collected, computed, and processed from the subdistrict offices under the supervision of the following subdistrict chiefs:

Robert D. Livesay, Knoxville  
W. Harry Doyle, Jr., Memphis  
Delmer J. O'Connell, Nashville

The data were collected, computed, and processed by the following personnel:

E.G. Baker	C.R. Gamble	J.G. Lewis
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A.K. Brachmann	J.T. Hamilton	B.W. McMaster
D.M. Brown	W.B. Hinchey	R.R. Perry
W.D. Canaan	C.L. Hundley	G.B. Smith
G.J. Englemeier	G.L. Jones	L.B. Thomas
B.N. Fraley	B.B. Keener	M.R. Williams

This report was prepared in cooperation with the State of Tennessee and with other agencies under the general supervision of V. Jeff May, Data Management Section Chief; and Ferdinand Quinones, District Chief, Tennessee.







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## WATER RESOURCES DATA FOR TENNESSEE, 1986

### INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State, local, and Federal agencies, obtains a large amount of data pertaining to the water resources of Tennessee each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Tennessee."

This report consists of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and water levels and water quality of ground-water wells. This volume contains discharge records for 96 gaging stations; stage only at two gaging stations; stage and contents at 28 lakes and reservoirs; water quality for 43 stations, 28 of these at gaging stations, and 45 wells; and water levels at 33 observation wells. Also included are data for 90 crest-stage partial-record stations, and 78 low-flow partial-record stations. Locations of these sites are shown on figures 5 and 6. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements and miscellaneous analyses or as seepage investigations.

This series of annual reports for Tennessee began with the 1961 water year with a report that contained only data relating to the quantities of surface water. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to introduction of this series and for several years concurrent with it, water-resources data for Tennessee were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States." For the 1961 through 1970 years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from Distribution Branch, Text Products Section, U.S. Geological Survey, 604 South Pickett Street, Alexandria, VA 22304.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report TN-86-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (615) 736-5424.

### COOPERATION

The U.S. Geological Survey and agencies of the State of Tennessee have had cooperative agreements for the systematic collection of streamflow records since 1918, for ground-water levels since 1946, and for water-quality records since 1960. Organizations that assisted in collecting data contained in this report through cooperative agreement with the Survey are:

Tennessee Department of Conservation, Charles A. Howell, III, Commissioner.  
Tennessee Department of Health and Environment, James E. Word, Commissioner, through  
Office of Water Management, Elmo Lunn, Director.  
Tennessee Department of Transportation, Robert E. Farris, Commissioner, through Lewis Evans,  
State Transportation Engineer and Ray Terrell, Executive Director Bureau of Planning and  
Development and Clellon L. Loveall, Engineer Director Structures Division.  
Tennessee Wildlife Resources Agency, Gary Myers, Executive Director.  
City of Bartlett, Bobby K. Flaherty, Mayor.  
City of Franklin, Jeff Bethurum, Mayor.  
City of Lawrenceburg, Ivan Johnston, Mayor.  
City of Memphis, Richard C. Hackett, Mayor.  
City of Murfreesboro, Joe B. Jackson, Mayor.  
Shelby County, William Morris, Mayor.  
Metropolitan Government of Nashville and Davidson County, Richard H. Fulton, Mayor,  
through Department of Public Works, Peter Heidenreich, Director.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, Nashville District, in collecting records for 20 gaging stations and 7 water-quality stations and by the Tennessee Valley Authority for 21 gaging stations. All data are published in this report.

The following organization also aided in collecting records for publication in this report: Bowaters Southern Paper Corporation

Organizations that supplied data are acknowledged in station descriptions.

#### SUMMARY OF HYDROLOGIC CONDITIONS

##### Surface water

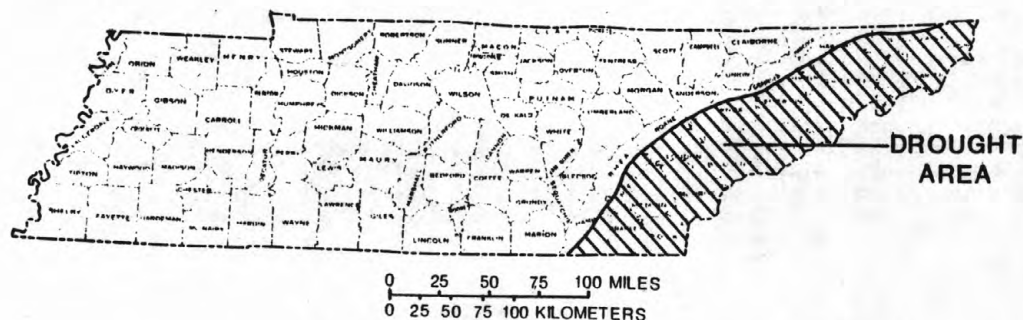
Tennessee has an abundance of rivers, lakes, and streams. The largest of these, excluding the Mississippi River which forms the State's western boundary, are the Tennessee and Cumberland Rivers which are highly regulated. Natural runoff conditions are best represented in these basins, as well as in the rest of Tennessee, by data from gages on unregulated rivers and streams, such as Harpeth River near Kingston Springs (03434500) in the Cumberland Basin, and Emory River at Oakdale (03540500) and Buffalo River near Lobelville (03604500) in the Tennessee Basin. Comparisons of monthly average and yearly average discharge for the 1986 water year with the base period 1951-80 are shown in figure 1 for these three gaging stations.

Few major floods are known to have occurred in Tennessee during the 1986 water year because of the below-normal rainfall that began in 1985 and continued through 1986. According to the National Weather Service, rainfall during the 1986 calendar year was 68 percent of normal at Knoxville, 81 percent at Chattanooga, 65 percent at Nashville, and 75 percent at Memphis. The fact was also noted that the first half of 1986 was the second driest 6-month period since records began in 1871 in Nashville, Tennessee.

At most gaging stations, the annual peak for the 1986 water year approximated the peak base discharge, which is a threshold discharge set to record from four to six higher peaks per year. An intense storm did occur on September 3-4, 1986, over a localized area in central Tennessee which included Rutherford County and parts of some adjoining counties. The heaviest rainfall and runoff occurred in Murfreesboro and the upper East Fork Stones River basin. The East Fork Stones River near Lascassas gage reached a stage of 37.97 feet, which is just 1.51 feet below the maximum of record, 39.48 feet. Indirect measurements of peak discharge on some small tributaries to East Fork Stones River upstream from the Lascassas gage show peak discharges greater than the 100-year recurrence interval discharge (see section "Discharge at Partial-Record Stations and Miscellaneous Sites," p. 241).

Due to the unusually dry spring, mean annual streamflow in 1986 was below the long-term average across the State. In the Cumberland River basin, runoff ranged from a low of 32 percent of the long-term average for Roaring River above Gainesboro (03418070) to a high of 69 percent of the long-term average for Sulphur Fork Red River near Adams (03436000). At Tennessee River basin gages, runoff ranged from 22 percent of the long-term average at South Chestue Creek near Benton (03565300) to 83 percent at Reedy Creek at Orebank (03487550). At gages in the lower Mississippi River basin (western Tennessee), runoff ranged from 44 percent of the long-term average at Loosahatchie River near Arlington (07030240) to 71 percent at Obion River at Obion (07026000).

Although mean flow was below average, a major hydrological drought occurred only in extreme eastern Tennessee in 1986 as shown in the figure below. In the Cumberland River basin, most streams had average recurrence intervals of annual minimum flow of about 2 years. In the Tennessee River basin, recurrence intervals of annual minimum flows varied across the basin. In the eastern part of the basin, the minimum daily flow was less than the 20-year recurrence interval flow at several stations. In the central and western parts of the basin, the minimum daily flow was about a 5-year recurrence interval flow.



Location of major drought area.

In the western part of the state, minimum flows were near the long-term average. Most streams had recurrence intervals of minimum daily flow of less than 2 years. However, Beaver Creek at Huntingdon equaled the low for the period of record (1962-86) of 19 ft<sup>3</sup>/s set in 1965.

Comparisons of the 1986 water year minimum daily flows to selected long-term recurrence minimum flows are shown in table 1.

Table 1.--Comparison of 1986 daily average minimum with 1-day 20-year and 3-day 20-year average minimum recurrence interval flow with daily average minimum flow recurrence intervals

Station name	1986 Minimum daily flows		1-Day 20-year	3-Day 20 year
	Discharge (ft <sup>3</sup> /s)	Recurrence interval (years)	recurrence interval minimum flow (ft <sup>3</sup> /s)	recurrence interval minimum flow (ft <sup>3</sup> /s)
<b>CUMBERLAND RIVER BASIN</b>				
Wolf River near Byrdstown	7.7	2	3.2	3.6
East Fork Stones River at Woodbury	4.5	10	3.6	3.8
Sycamore Creek near Ashland City	15	<2	9.0	9.3
Sulphur Fork Red River near Adams	18	<2	3.6	3.7
<b>TENNESSEE RIVER BASIN</b>				
Cosby Creek above Cosby	2.7	5	1.6	1.6
Nolichucky River at Embreeville	194	10	160	173
Reedy Creek at Orebank	5.9	5	4.2	4.3
Big Creek near Rogersville	2.7	10	2.2	2.3
Beech Creek at Kepler	0.77	>20	1.2	1.3
Little River above Townsend	29	>20	29	30
Poplar Creek near Oak Ridge	4.2	>20	4.7	4.8
Sewee Creek near Decatur	11	>20	12.8	12.9
South Chestue Creek near Benton	1.7	>20	2.2	2.3
Wolftever Creek near Ooltewah	1.1	>20	1.7	1.9
South Chickamauga Creek near Chickamauga	70	>20	76	79
Sequatchie River near Whitwell	40	3	25	27
Shoal Creek at Iron City	81	5	61	66
Buffalo River near Lobelville	211	3	156	157
<b>LOWER MISSISSIPPI RIVER BASIN</b>				
Beaver Creek at Huntingdon	19	>20	20	20
Obion River at Obion	481	<2	230	241
Loosahatchie River near Arlington	80	<2	64	66

#### Surface-Water Quality

Water-quality data were collected at 38 surface-water sites during the 1986 water year. Most of the sampling sites on major rivers are located downstream from impoundments. For example, seven of nine NASQAN sites in the State are located on regulated rivers. Impoundments can have a significant effect on water quality; for example, the detention time in storage can affect constituent concentrations, and some parameters, such as suspended-sediment concentrations, are reduced as detention time increases.

At the main-stem stations on the Tennessee and Cumberland Rivers, observed dissolved-solids concentrations did not exceed 152 mg/L. Both streams contain calcium bicarbonate type water. Observed pH values ranged from 7.5 to 8.4 units and 7.2 to 9.0 units, respectively. Trace element concentrations were low; none exceeded Environmental Protection Agency criteria established for public-water supplies. When compared to data from previous years, no significant differences were observed.

Dissolved-oxygen monitors are operated on the Cumberland River below Old Hickory and Cordell Hull Dams. Observed dissolved-oxygen concentrations during the year ranged from 3.0 to 15.0 mg/L below Old Hickory Dam and from 4.1 to 12.5 mg/L below Cordell Hull Dam.

#### Sediment

The suspended sediment transported by Tennessee streams consists mostly of silt and clay-sized material. Measured suspended-sand concentrations rarely exceed 25 percent of sampled concentrations even in the sand-bed channels of western Tennessee. Calculations for sand-bed channels indicate that unmeasured suspended-sediment load (zone between sediment sampler and bed) accounts for less than 10 percent of the total sediment load. Unmeasured load (the load not accounted for by the product of water discharge, measured suspended-sediment concentration, and a units conversion factor) has not been determined for central and eastern Tennessee streams because the bed material is generally quite coarse and variable. However, unmeasured load in these streams is believed to be only a small percentage of total load.



Suspended-sediment transport curves show that when flow is less than about 1 (ft<sup>3</sup>/s)/mi, western Tennessee streams have higher concentrations; but when flow exceeds about 10 (ft<sup>3</sup>/s)/mi, concentrations in middle and eastern streams can equal or exceed those in western streams. The more efficient processes of delivering products of erosion to stream channels in middle and eastern Tennessee basins are responsible for the rapid increases in suspended-sediment concentrations with increasing flow.

Sediment yields for middle and eastern Tennessee basins generally are less than 800 (tons/mi<sup>2</sup>)/yr, however, heavily strip-mined basins can have yields from 1,000 to 3,000 (tons/mi<sup>2</sup>)/yr. Yields for the heavily agricultural and channelized basins of western Tennessee generally range from 700 to 1,000 (tons/mi<sup>2</sup>)/yr. Yields for the Hatchie River in western Tennessee are less than 200 (tons/mi<sup>2</sup>)/yr, reflecting the lack of flood plain agriculture and channelization.

#### Ground-Water Levels

The fluctuation of ground-water levels in the State are characterized by representative hydrographs of four observation wells shown in figure 2. The hydrographs for wells in Putnam and Hamilton Counties are indicative of conditions that existed in the eastern half of the State, while those in Dickson and Lauderdale Counties reflect the conditions that existed in the western half of the State during the 1986 water year.

In the eastern part of the State, water levels in wells Hm:O-15 and Pm:C-1 were at or near record lows during most of the year. Water levels in both wells remained below the record low after April-May 1986. A low water level of 17.6 ft (about 10 ft below the previous record) was reached during August 1986 at Hm:O-15. In Middle and West Tennessee, water levels were generally above record lows for the period October through May. Water levels in well Di:F-19 in central Tennessee set new record lows May through September. At well Ld:F-4, western Tennessee water levels declined after March and set record lows in August and September.

Hydrographs of the lowest daily water level for all the continuous-record wells are shown with the station description and water-level data in the body of this report. Those hydrographs show the water-level fluctuations for these wells. Water levels in wells located in Middle and East Tennessee generally respond quicker and with larger fluctuations in water level than the wells in the sand and gravel aquifers in West Tennessee. Most wells across the State had declining water levels from late spring through fall because of below-normal precipitation and because it is normal for ground-water levels to decline in this period.

Water levels in some of the wells respond to pumping. The fluctuation due to pumping is often superimposed on the natural trends. The heavy use of ground water in Memphis has caused long-term declines in water levels in both confined and unconfined aquifers as shown by the water levels at index well Sh:Q-1 (fig. 3).

#### Ground-Water Quality

Water-quality samples were collected at 45 wells in Shelby County, Tennessee. Thirty-six of these wells are screened in the surficial aquifer below and adjacent to the North Hollywood Dump, the State's top-ranked Superfund site. Analyses included major constituents, and in a few wells, priority pollutant metals and organochlorine pesticides. A trend of increasing conductance and dissolved solids (especially chloride) was evident along a ground-water flow path under the dump. For example, the mean concentration of dissolved chloride was 12 mg/L in six samples from wells upgradient from the dump; for six wells downgradient from the dump, the mean chloride concentration was 171 mg/L. Arsenic and barium were detected in several wells at concentrations near or in excess of drinking-water standards. The maximum concentration of dissolved iron was 12,000 ug/L. No pesticides were detected in the single sample analyzed for those compounds.

The remaining nine wells are part of an observation network at or near pumping stations for Memphis, Light, Gas and Water. These wells are screened in the Memphis Sand aquifer, which is the public water supply for the city. Water from this aquifer is relatively soft and low in dissolved solids. For the 1986 sampling period, the median hardness was 53 mg/L as CaCO<sub>3</sub>; the median dissolved-solids concentration was 87 mg/L. The water must be treated to remove iron. Samples during the past year had a median iron concentration of 860 ug/L.

# WATER RESOURCES DATA FOR TENNESSEE, 1986

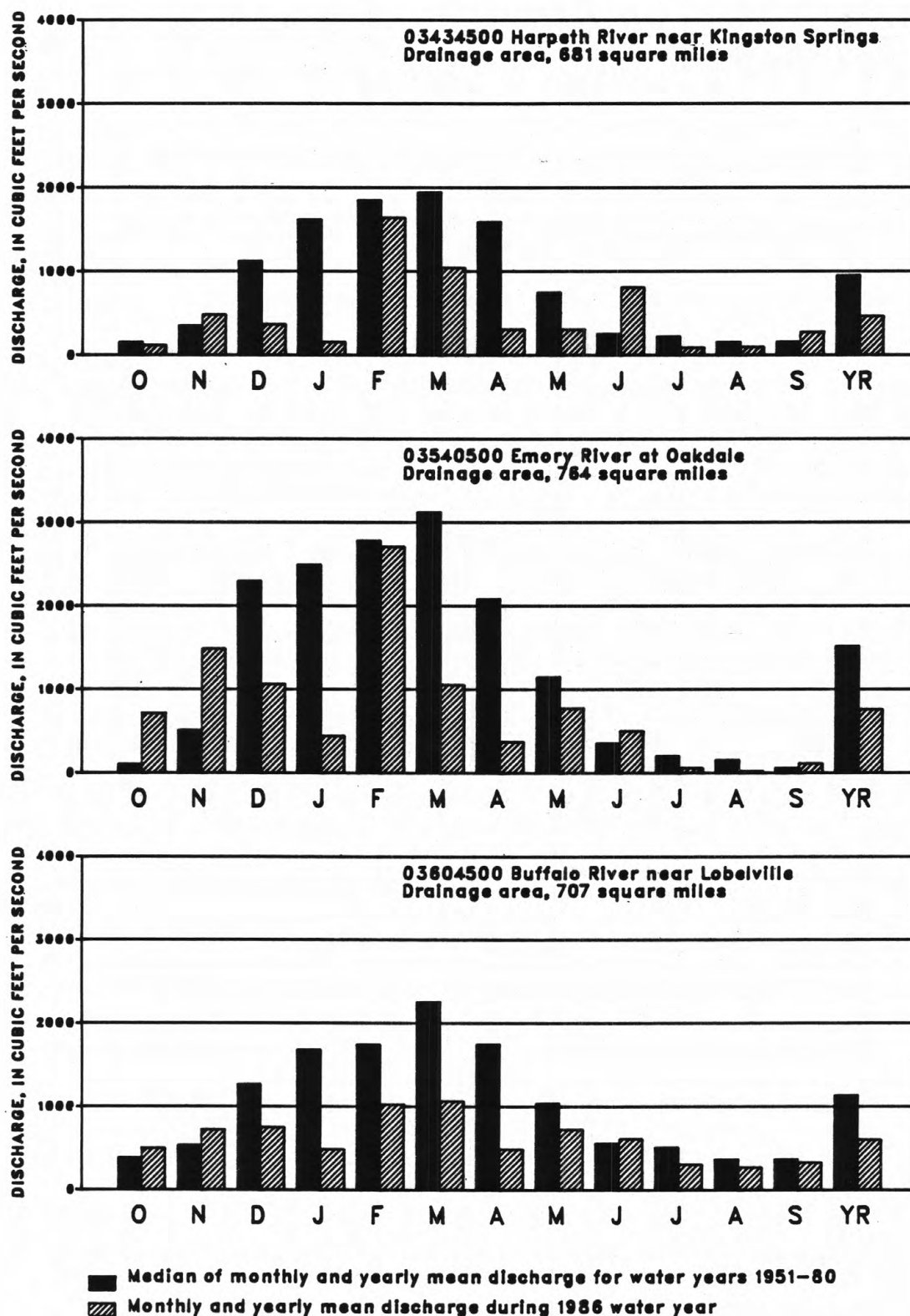
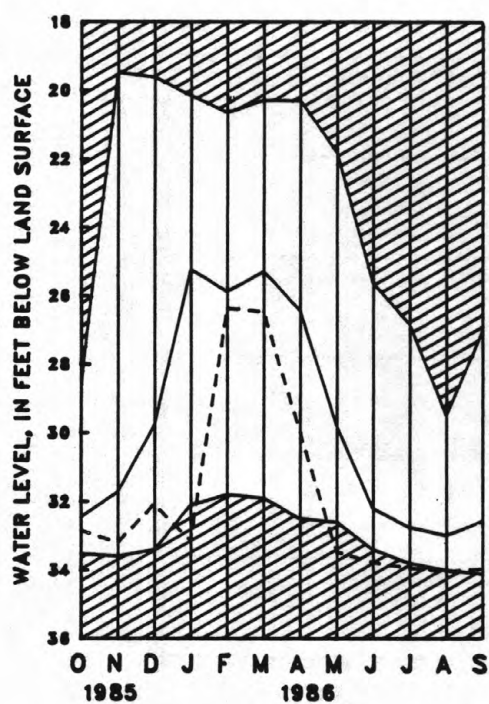


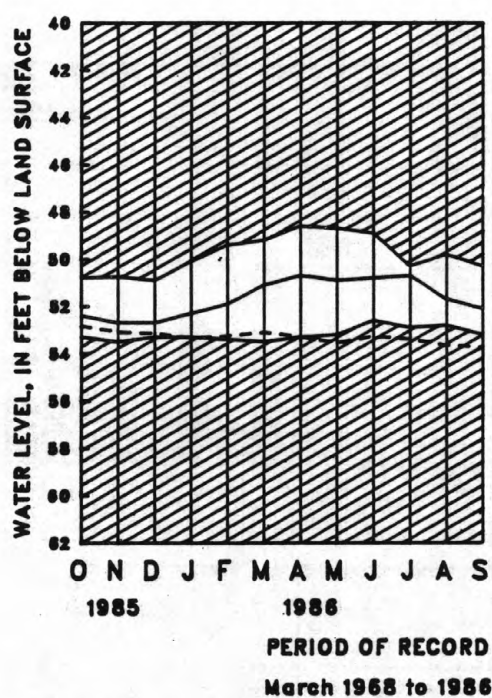
Figure 1.--Runoff during 1986 water year compared with median runoff for period 1951-80 for three representative gaging stations.

## WATER RESOURCES DATA FOR TENNESSEE, 1986

DICKSON COUNTY DI:F-19



PUTNAM COUNTY PM:C-1



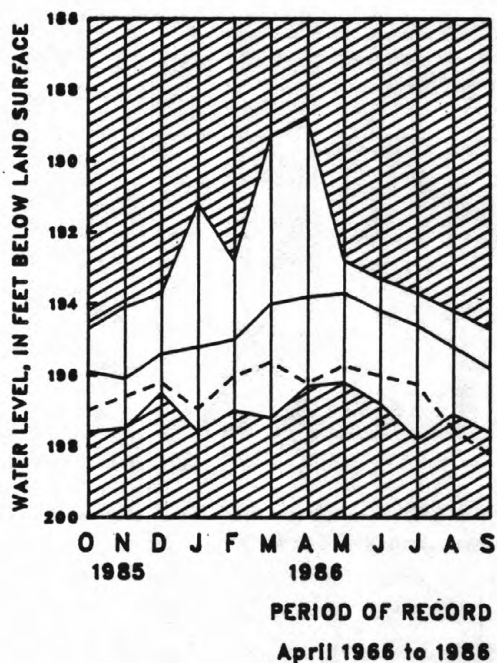
## HYDROGRAPH EXPLANATION

NOTE: ALL GROUND-WATER LEVELS SHOWN REPRESENT AN INSTANTANEOUS WATER LEVEL RECORDED ON THE 25TH DAY OR NEAR END OF MONTH

----- CURRENT WATER YEAR DATA  
----- MEDIAN OF PREVIOUS RECORD

UNSHADED AREA SHOWS EXTREMES FOR LOWEST WATER LEVEL ON THE 25TH OR NEAR END OF MONTH FOR PERIOD OF RECORD, EXCLUDING CURRENT WATER YEAR

LAUDERDALE COUNTY LD:F-4



HAMILTON COUNTY HM:O-15

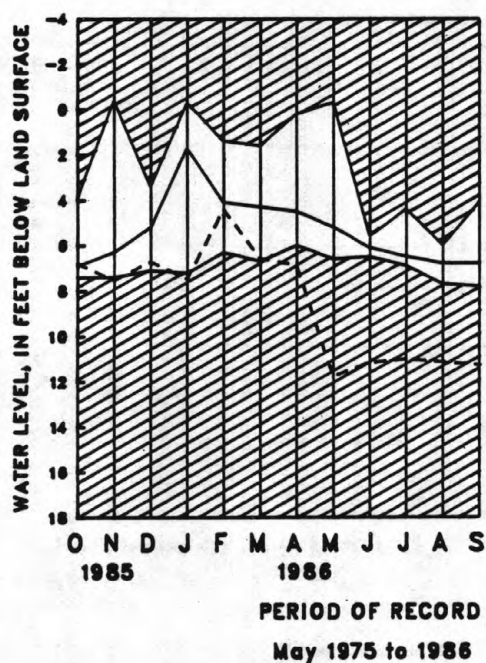


Figure 2.--Ground-water levels on the 25th of each month for the 1986 water year compared to the maximum, minimum, and median water levels on 25th of each month for the previous years of record.



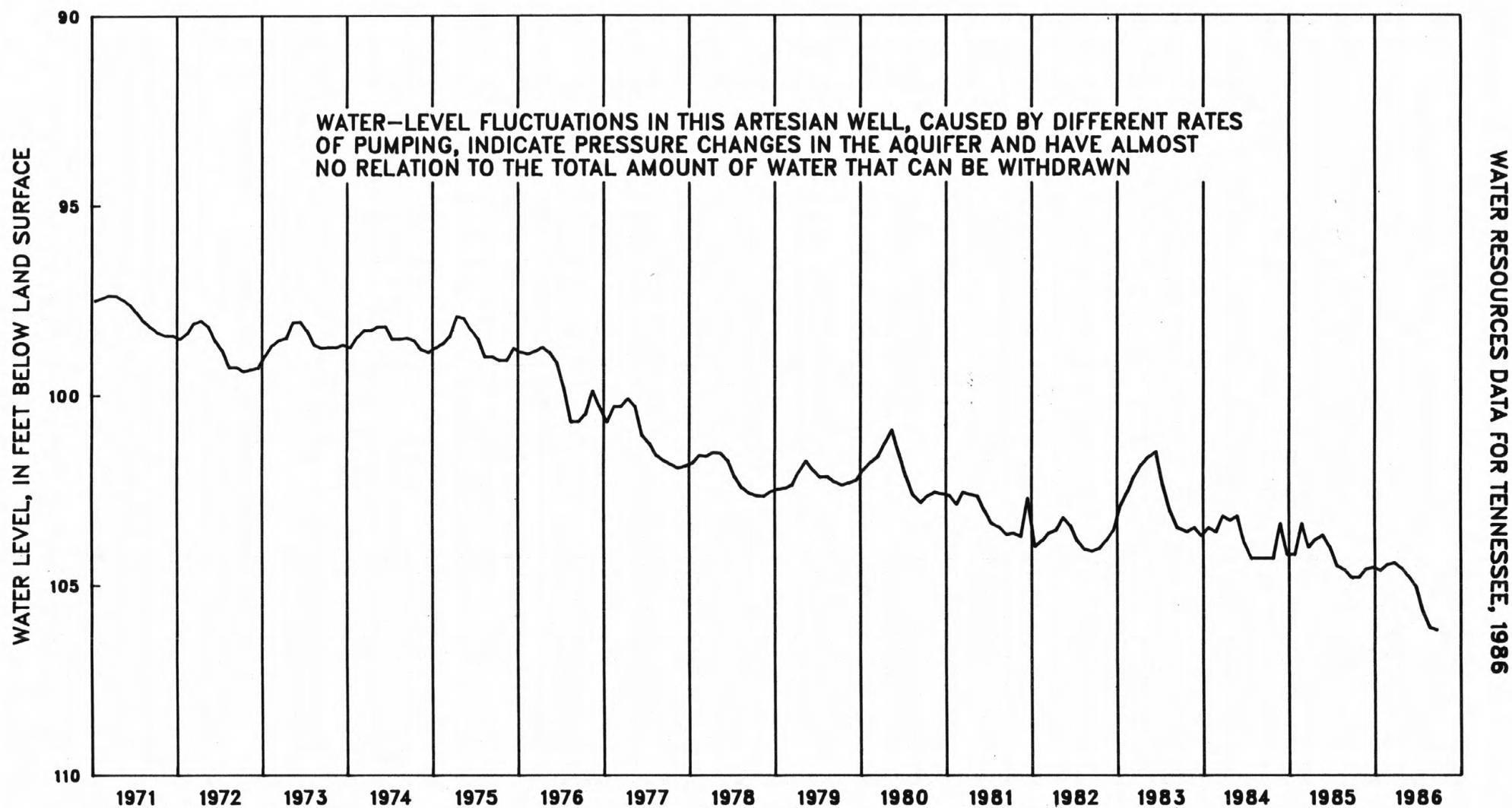


Figure 3.--Hydrograph of well SH:Q-1 showing long-term decline in the water level by calendar year.

## SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

National stream-quality accounting network (NASQAN) is a data collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

## EXPLANATION OF RECORDS

The surface-water and ground-water records published in this report are for the 1986 water year that began October 1, 1985, and ended September 30, 1986. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The locations of the stations and wells where the data were collected are shown in figures 6 and 7. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether streamsite or well, in this report is assigned a unique identification number. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for surface-water stations and the "latitude-longitude" system is used for wells.

## Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the "List of Stations" in the front of this report. Each indentation represents one rank. This downstream order and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

Each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete number for each station such as 03540500...., which appears just to the left of the station name, includes the 2-digit part number "03" plus the multi-digit downstream order number "540500...." This downstream numbering system is used in most cases; however, in some cases latitude and longitude numbers are assigned to hydrologic stations and partial-record stations as a means of identification (See Numbering System for Wells).

## Numbering system for wells

Downstream order station numbers are not assigned to wells. The well numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells within a 1-second grid. See figure 4 on the next page.

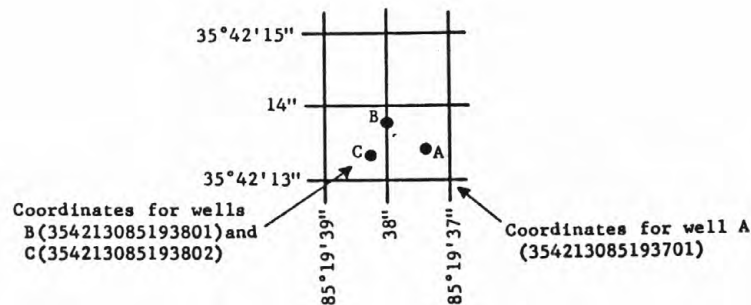


Figure 4.--System for numbering wells (latitude and longitude).

#### Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report.

#### Data Collection and Computation

The data obtained at a complete-record gaging station on a stream consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relation between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relation between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the Geological Survey. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow-over-dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed from gage heights and rating tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes of the personnel making the measurements are used in applying the gage heights to the rating tables. The shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth



or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and comparable records of discharge for other stations in the same or nearby basins.

At some stream-gaging stations, the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed. If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

#### Data Presentation

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, description information, such as station location; period of record; average discharge; historical extremes; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

**LOCATION.**--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileage is that determined and used by the Geological Survey, Tennessee Valley Authority, or other agencies.

**DRAINAGE AREA.**--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

**PERIOD OF RECORD.**--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one whose location was such that records from it can reasonably be considered equivalent with records from the present station.

**REVISED RECORDS.**--Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

**GAGE.**--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see "Definition of terms"), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

**REMARKS.**--All periods of estimated daily-discharge record will either be identified by date for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.



COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

AVERAGE DISCHARGE.--The discharge value is computed as the arithmetic mean of the water-year mean discharges. It is not computed for stations having fewer than 5 complete water years of record or for stations where diversions, storage, or other water-use practices cause the value to be meaningless.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum stages and maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN."), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

#### Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

#### Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft<sup>3</sup>/s; to the nearest tenth between 1.0 and 10 ft<sup>3</sup>/s; to whole numbers between 10 and 1,000 ft<sup>3</sup>/s; and to 3 significant figures to more than 1,000 ft<sup>3</sup>/s.

The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

#### Other Data Available

Records of discharge, not published by the Geological Survey, are collected in Tennessee at several sites by the U.S. Army Corps of Engineers and Tennessee Valley Authority. The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of these sites as well as an index of records of discharge collected by other agencies but not published by the Geological Survey. Information on records at specific sites can be obtained from that office upon request.

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables are on file in the Tennessee District office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District office.

#### Records of Surface-Water Quality

Records of surface-water quality ordinarily are collected at or near stream-gaging stations. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

#### Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

#### Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

#### On-Site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey District Office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (NASQAN) (see definitions) are obtained from at least several verticals.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the U.S. Geological Survey District Office whose address is given on the back of the title page of this report.

#### Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, maximum, minimum, and mean temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the District office and are also published in this report.

#### Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of the quantities of suspended sediment, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

#### Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratories in Arvada, Colo. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

#### Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.



DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor, temperature recorder, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Users of U.S. Geological Survey water-quality data should be aware of this update procedure because corrections are not documented in the State data-report series.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

#### Remark Codes

The following remark codes may appear with the water-quality data in this report:

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)
L	Biological organisms count less than 0.5 percent (organisms may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant

#### Records of Ground-Water Levels

Only ground-water level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

#### Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Tables of water-level data are presented by counties arranged in alphabetical order. Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs.

Water-level records are obtained from direct measurements with a steel tape or from the graph or punched tape of a water-stage recorder. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is



given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error in determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

#### Data Presentation

Each well record consists of two parts, the station description and the data table of water levels observed during the water year. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); the hydrologic-unit number; the distance and direction from a geographic point of reference; and the owner's name.

AQUIFER.--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

INSTRUMENTATION.--This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on weekly, monthly, or some other frequency of measurement.

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) National Geodetic Vertical Datum of 1929 (NGVD of 1929).

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that are also water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

PERIOD OF RECORD.--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be noted.

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence.

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum and all taped measurements of water level are listed. For wells equipped with recorders, only abbreviated tables are published; generally, only water-level lows are listed for every fifth day and at the end of the month (eom). The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table. Because all values are not published for wells with recorders, the extremes may be values that are not listed in the table.

#### Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that for most sampling sites they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes slowly; therefore, for most general purposes one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

#### Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey Techniques of Water-Resources Investigations" manuals listed on a following page. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood in the well casing where it would have been exposed to the atmosphere and to the material comprising the casings.

#### Data Presentation

The records of ground-water quality are published in a section titled QUALITY OF GROUND WATER immediately following the ground-water-level records. Data for quality of ground water are listed alphabetically by County and are identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water. The REMARK codes listed for surface-water-quality records are also applicable to ground-water-quality records.

#### ACCESS TO WATSTORE DATA

The National Water Data STORAGE and Retrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from each of the Water Resources Division's district offices (see address given on the back of the title page).

General inquiries about WATSTORE may be directed to:

Chief Hydrologist  
U.S. Geological Survey  
437 National Center  
Reston, Virginia 22092

## DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at  $44.5^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$  on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at  $35^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$  on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Bottom material in tables of data, refers to the chemical analysis of unconsolidated matter described as bed material and specifically includes anthropogenic matter in addition to natural solid material.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream.

Cubic feet per second per square mile  $[(\text{ft}^3/\text{s})/\text{mi}^2]$  (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second ( $\text{ft}^3/\text{s}$ ) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic foot per second-day  $[(\text{ft}^3/\text{s})/\text{d}]$  is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,445 cubic meters.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved is that material in a representative water sample which passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.



Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ( $\text{CaCO}_3$ ).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each well.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per gram ( $\mu\text{g/g}$ ) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent sorbed per unit mass (gram) of sediment.

Micrograms per liter ( $\mu\text{g/L}$ ,  $\mu\text{g/L}$ ) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter ( $\text{mg/L}$ ,  $\text{mg/L}$ ) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in  $\text{mg/L}$  and is based on the mass of dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

The National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.



Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

<u>Classification</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
Clay.....	0.00024 - 0.004	Sedimentation
Silt.....	.004 - .062	Sedimentation
Sand.....	.062 - 2.0	Sedimentation or sieve
Gravel.....	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population in terms of types, numbers, mass, or volume.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

Picocurie (PC, pCi) is one trillionth ( $1 \times 10^{-12}$ ) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields  $3.7 \times 10^{10}$  radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft<sup>3</sup>/s) x 0.0027.

Suspended-sediment load is the quantity of suspended sediment passing a section in a specified period.

Total sediment discharge (tons/day) is the total quantity of sediment (suspended-sediment and bed-load) as measured by dry weight or volume, that passes a section during a specified period.

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and the volume of water per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Thermograph is an instrument that continuously records variations of water temperature on a chart. The more general term "temperature recorder" is the term used in the table headings and refers to any instrument that records water temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY) is the quantity of substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended mixture and that the analytical method determined all of the constituent in the sample.)

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

Total load is the quantity of any individual constituent, as measured by dry mass or volume that passes through a section during a specified period. It is computed by multiplying the total stream discharge, times the mg/L of the constituent, times the factor 0.0027, times the number of days.

Total recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1980, is called the "1980 water year."

WDR is used as an abbreviation for "water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published before 1975.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.



The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 Pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel and dispersion in streams by dye tracing*, by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.



- 3-C1. *Fluvial sediment concepts* by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment* by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge* by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves* by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations* by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply* by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics* by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells* by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments* by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy* by P. R. Barnetti and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for analysis of organic substances in water* by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples* edited by P. E. Greeson, T. A. Ehlike, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments* by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis* by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels* by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells* by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers* by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.



## WATER RESOURCES DATA FOR TENNESSEE, 1986

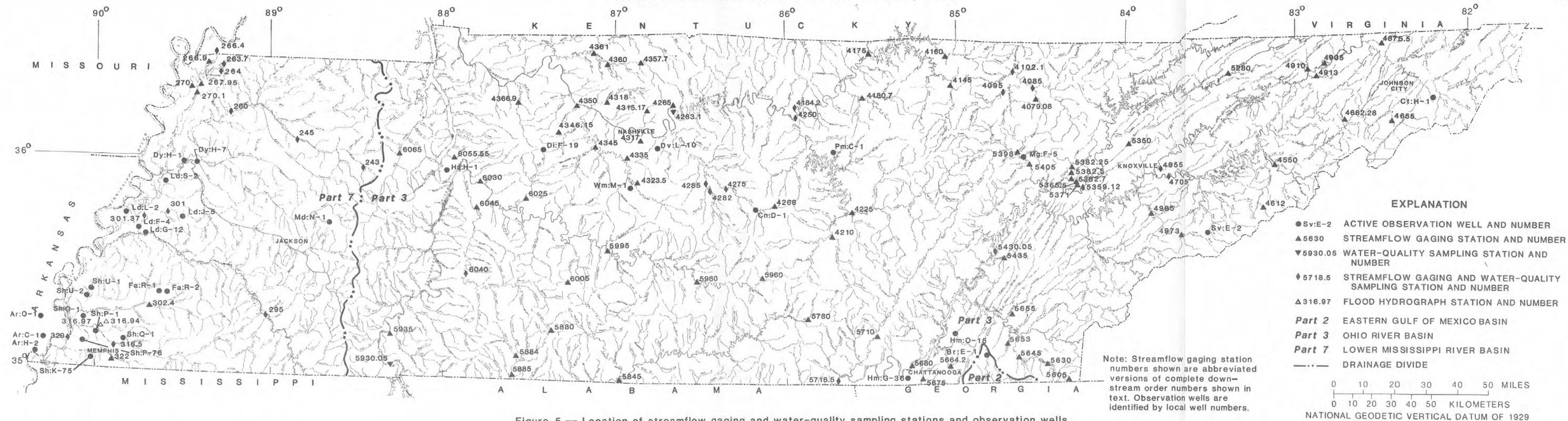


Figure 5.-- Location of streamflow gaging and water-quality sampling stations and observation wells.

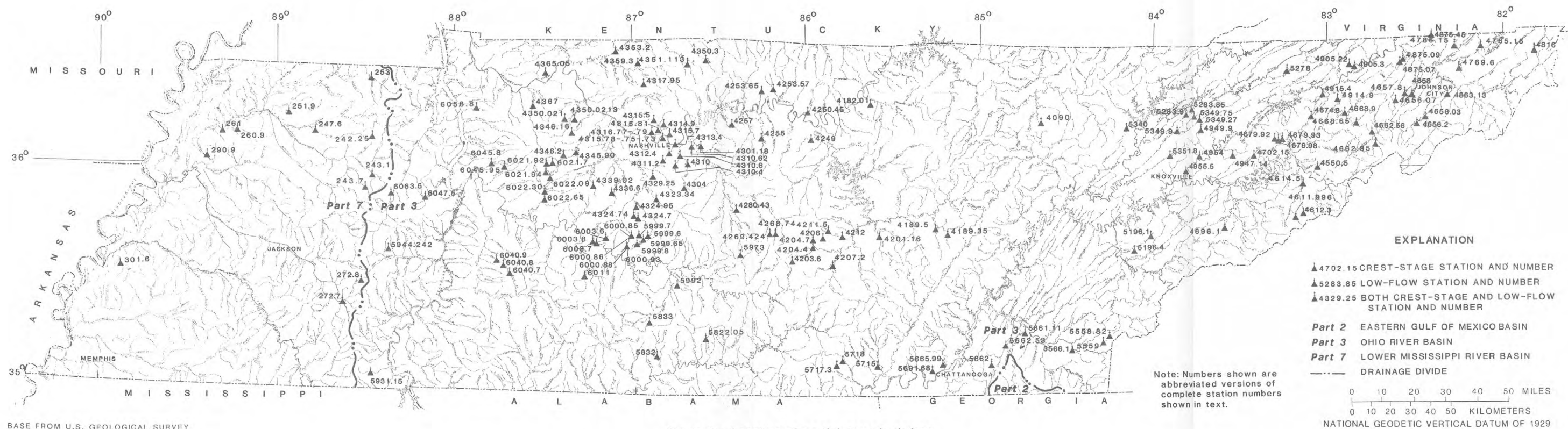


Figure 6.--Location of partial record stations.



SECTION 1000, CHAPTER 100, PUBLIC ACTS OF 1901  
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## CUMBERLAND RIVER BASIN

27

03407908 NEW RIVER AT CORDELL, TN

LOCATION.--Lat 36°20'10", long 84°27'06", Scott County, Hydrologic Unit 05130104, on right bank at Cordell Bridge, 3.4 mi south of Winona, and at mile 24.9.

DRAINAGE AREA.--198 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1975 to April 1977 (discharge measurements only); May 1977 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,180 ft above National Geodetic Vertical Datum, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 22, 26, 29, 30, Jan. 9-12, 14, 15. Records fair. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--9 years, 440 ft<sup>3</sup>/s, 30.18 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,900 ft<sup>3</sup>/s, Mar. 21, 1980, gage height, 24.58 ft; minimum, 1.8 ft<sup>3</sup>/s, Oct. 17, 1980, gage height, 1.72 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Feb. 18	0245	*8,530	*12.52	No other peak greater than base discharge.			

Minimum discharge, 9.8 ft<sup>3</sup>/s, Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	58	63	764	248	149	345	145	107	221	39	14	54	
2	245	93	600	224	164	328	140	100	916	57	14	722	
3	226	125	429	227	203	315	131	90	366	149	14	683	
4	218	266	363	212	207	280	124	82	291	63	12	276	
5	131	547	328	196	707	250	115	80	245	40	11	202	
6	98	340	302	164	1190	234	113	76	189	30	10	142	
7	79	253	247	163	1250	211	136	72	152	25	11	99	
8	66	202	222	129	837	182	289	76	149	22	12	72	
9	58	158	203	110	553	167	405	68	413	20	11	54	
10	48	139	182	100	419	162	309	57	402	37	17	43	
11	45	126	174	100	359	186	266	51	365	99	679	37	
12	43	113	236	110	280	182	231	55	272	73	206	127	
13	41	103	326	118	230	314	204	59	178	71	80	101	
14	40	97	453	100	225	493	181	57	138	135	45	64	
15	41	92	412	90	238	641	163	50	114	131	31	47	
16	42	89	363	92	251	563	148	43	96	84	24	56	
17	41	330	309	90	3380	448	140	38	81	107	25	70	
18	36	274	263	91	5690	371	132	34	59	77	27	51	
19	34	220	197	235	1870	2100	120	37	58	48	24	45	
20	33	184	201	290	1060	1360	116	67	51	36	133	65	
21	66	159	177	238	661	745	170	48	46	30	70	69	
22	250	614	150	222	482	496	176	35	41	25	41	65	
23	128	683	182	199	390	392	151	1670	38	21	30	201	
24	153	449	168	178	353	324	138	2070	34	20	24	213	
25	150	338	149	174	339	273	133	1810	30	17	21	119	
26	119	288	110	198	297	240	130	858	26	17	20	84	
27	99	312	120	179	346	222	124	1000	24	16	49	61	
28	86	2240	118	194	370	197	118	729	61	21	135	48	
29	79	3410	100	174	---	177	149	550	52	35	121	42	
30	67	1290	90	167	---	165	119	389	50	19	61	37	
31	62	---	122	147	---	155	---	289	---	15	38	---	
TOTAL	2882	13597	8060	5159	22500	12518	5016	10747	5158	1579	2010	3949	
MEAN	93.0	453	260	166	804	404	167	347	172	50.9	64.8	132	
MAX	250	3410	764	290	5690	2100	405	2070	916	149	679	722	
MIN	33	63	90	90	149	155	113	34	24	15	10	37	
CFSM	.47	2.29	1.31	.84	4.06	2.04	.84	1.75	.87	.26	.33	.67	
IN.	.54	2.55	1.51	.97	4.23	2.35	.94	2.02	.97	.30	.38	.74	
CAL YR 1985	TOTAL	117312		MEAN	321	MAX	4150	MIN	29	CFSM	1.62	IN.	22.04
WTR YR 1986	TOTAL	93175		MEAN	255	MAX	5690	MIN	10	CFSM	1.29	IN.	17.51

## CUMBERLAND RIVER BASIN

03408500 NEW RIVER AT NEW RIVER, TN

LOCATION.--Lat 36°23'08", long 84°33'17", Scott County, Hydrologic Unit 05130104, on left bank at town of New River, 700 ft downstream from Phillips Creek, 1,000 ft downstream from bridge on U.S. Highway 27, 1.7 mi downstream from Brimstone Creek, and at mile 8.6.

DRAINAGE AREA.--382 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1934 to current year. Gage-height records collected in this vicinity 1908-52 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1436: Drainage area. WRD TN-73: 1939(M), 1951(M), 1970(M).

GAGE.--Water-stage recorder. Datum of gage is 1,092.67 ft above National Geodetic Vertical Datum of 1929.

AVERAGE DISCHARGE.--51 years, 739 ft<sup>3</sup>/s, 26.27 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,700 ft<sup>3</sup>/s, May 27, 1973, gage height, 37.91 ft, from high water mark in gage well, from rating curve extended above 27,000 ft<sup>3</sup>/s on basis of slope-area and contracted-opening measurements of peak flow; no flow part of each day Aug. 12-15, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 23, 1929, reached a stage of 41.2 ft, discharge, 74,700 ft<sup>3</sup>/s, estimated, based on field survey at old U.S. Weather Bureau gage, 1,200 ft upstream at datum 3.41 ft higher.

NOTE.--Records provided by the Kentucky District for the 1986 water year were not available in time for inclusion in this report. These records will be published in a subsequent report.

CUMBERLAND RIVER BASIN

29

03408500 NEW RIVER AT NEW RIVER, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-67, 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1976 to current year.

pH: October 1976 to current year.

WATER TEMPERATURE: October 1976 to current year.

DISSOLVED OXYGEN: October 1976 to current year.

TURBIDITY: December 1976 to current year.

OXIDATION-REDUCTION POTENTIAL: December 1976 to September 1977.

SUSPENDED SEDIMENT DISCHARGE: October 1976 to current year.

INSTRUMENTATION.--Five parameter water-quality monitor and sediment pumping sampler since Oct. 21, 1976.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 896 microsiemens, July 11, 1985; minimum, 44 microsiemens, Apr. 4, 1977.

pH: 8.6 units, May 16, 1983; minimum, 5.3 units, Nov. 17, 1978.

WATER TEMPERATURE: Maximum, 32.5°C, July 16, 1980, minimum, 0.0°C, Jan. 1, 2, 13, 17, 19, Feb. 6, 1977,

Dec. 21, 22, 1981, Jan. 19, Dec. 24, 30, 1983, Feb. 8, 1984.

DISSOLVED OXYGEN: Maximum, 14.4 mg/L, Dec. 6, 1976; minimum, 5.6 mg/L, July 26, 1977.

TURBIDITY: Maximum, 3,000 JTU, Sept. 2, 1982; minimum, 0 JTU, several days 1982-85.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,190 mg/L, Aug. 8, 1981; minimum daily mean, 1 mg/L, on many days in 1976, Apr. 18, 1984.

SEDIMENT LOADS: Maximum daily, 262,000 tons, Apr. 5, 1977; minimum daily, 0.00 ton, Oct. 21-24, 27, 1980.

NOTE.--Records provided by the Kentucky District for the 1986 water year were not available in time for inclusion in this report. These records will be published in a subsequent report.

## CUMBERLAND RIVER BASIN

03409500 CLEAR FORK NEAR ROBBINS, TN

LOCATION.--Lat 36°23'18", long 84°37'49", Scott County, Hydrologic Unit 05130104, on right bank 300 ft downstream from Burnt Mill Bridge, 3.3 mi northwest of Robbins, and at mile 3.7.

DRAINAGE AREA.--272 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to September 1971, July 1975 to current year. Published as Clear Fork River near Robbins, October 1951 to September 1954.

REVISED RECORDS.--WSP 1306: 1931(M), 1936-37(M), 1943-44(M). WSP 1436: Drainage area. WSP 1910: 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 1,081.46 ft, Sandy Hook datum. Prior to Aug. 10, 1940, nonrecording gage at site 300 ft upstream at datum 1.00 ft higher.

AVERAGE DISCHARGE.--51 years (water years 1931-71, 1976-85), 474 ft<sup>3</sup>/s, 23.66 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,000 ft<sup>3</sup>/s Feb. 3, 1939, gage height, 18.5 ft from floodmarks, site and datum then in use, from rating curve extended above 14,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum observed, 0.2 ft<sup>3</sup>/s Sept. 19-21, 1932; minimum gage height observed, 0.28 ft Oct. 1-3, 1936, site and datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 23, 1929 reached a stage of 22.1 ft, former site and datum, from information by local residents, and flood of May 27, 1973, reached a stage of 18.92 ft, present site and datum, from floodmark; discharge 35,700 ft<sup>3</sup>/s, from rating curve extended above 14,000 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 18.5 ft.

NOTE.--Records provided by the Kentucky District for the 1986 water year were not available in time for inclusion in this report. These records will be published in a subsequent report.



CUMBERLAND RIVER BASIN  
03409500 CLEAR FORK NEAR ROBBINS, TN--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1977-82, October 1983 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1983 to current year.  
pH: October 1983 to current year.  
WATER TEMPERATURE: October 1983 to current year.  
DISSOLVED OXYGEN: October 1983 to current year.  
TURBIDITY: October 1983 to current year.  
SUSPENDED SEDIMENT DISCHARGE: October 1983 to current year.

INSTRUMENTATION.--Five parameter water-quality monitor and sediment pumping sampler since Oct. 1, 1983.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 254 microsiemens, July 29, 1984; minimum, 28 microsiemens, May 8, 1984.  
pH: Maximum, 8.1 units, Sept. 11, 1984, July 20, 1985; minimum, 5.2 units, April 6, 1977.  
WATER TEMPERATURE: Maximum observed, 34.0°C, July 16, 1980; minimum, 0.5°C, many days.  
DISSOLVED OXYGEN: Maximum, 14.2 mg/L Dec. 25, 26, 30, 31, 1983, Jan. 20, 21, 1984; minimum, 6.3 mg/L July 14, 15, 1985.  
TURBIDITY: Maximum, 370 JTU, May 6, 1984; minimum, 0 JTU, many days.  
SEDIMENT CONCENTRATIONS: Maximum daily mean, 353 mg/L, May 7, 1984; minimum daily mean, 1 mg/L, many days each year.  
SEDIMENT LOADS: Maximum daily, 16,900 tons, May 7, 1984; minimum daily, 0.03 tons, Sept. 25, 29, 30, Oct. 4, 1984.

NOTE.--Records provided by the Kentucky District for the 1986 water year were not available in time for inclusion in this report. These records will be published in a subsequent report.

## CUMBERLAND RIVER BASIN

03410210 SOUTH FORK CUMBERLAND RIVER AT LEATHERWOOD FORD, TN

LOCATION.--Lat 36°28'38", long 84°40'09", Scott County, Hydrologic Unit 05130104, on left bank at bridge on State Route 297, 1.0 mile above Anderson Branch, 1.3 miles below North White Oak Creek, 10.1 miles southwest of Oneida, and at mile 70.1.

DRAINAGE AREA.--806 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to current year. Occasional discharge measurements, water years 1961-62, 1979-80.

GAGE.--Water stage recorder. Datum of gage is 862.79 ft, Sandy Hook datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,100 ft<sup>3</sup>/s May 7, 1984, gage height, 31.22 ft; minimum discharge, 19 ft<sup>3</sup>/s Sept. 23-26, 1984.

NOTE.--Records provided by the Kentucky District for the 1986 water year were not available in time for inclusion in this report. These records will be published in a subsequent report.

CUMBERLAND RIVER BASIN

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03410210 SOUTH FORK CUMBERLAND RIVER AT LEATHERWOOD FORD, TN--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--May 1979 to July 1980, February 1984 to current year.

NOTE.--Records provided by the Kentucky District for the 1986 water year were not available in time for inclusion in this report. These records will be published in a subsequent report.



## CUMBERLAND RIVER BASIN

03414500 EAST FORK OBEY RIVER NEAR JAMESTOWN, TN

LOCATION.--Lat 36°24'58", Long 85°01'35", Fentress County, Hydrologic Unit 05130105, on right bank 200 ft upstream from bridge on State Highway 52, 0.5 mi upstream from Poplar Cove Creek, 5.3 mi west of Jamestown, and at mile 12.7.

DRAINAGE AREA.--202 mi<sup>2</sup>, includes 6.0 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--October 1942 to current year. Prior to February 1943 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 1276: 1944, 1946(M). WSP 1506: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 680.30 ft Sandy Hook Datum. Feb. 24 to Apr. 7, 1943, nonrecording gage 200 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--44 years, 418 ft<sup>3</sup>/s, 28.10 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,800 ft<sup>3</sup>/s, May 27, 1973, gage height, 30.46 ft, from rating curve extended above 32,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 3.6 ft<sup>3</sup>/s, Sept. 26-28, 1948; minimum gage height, 0.55 ft, Sept. 12-17, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in march 1929 reached a stage of about 30.7 ft, from flood profile by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft<sup>3</sup>/s, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Feb. 17	1900	*9,740	*14.44	No other peak greater than base discharge.			

Minimum discharge, 8.8 ft<sup>3</sup>/s, July 30, 31, Aug. 5, 6, 7, 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	748	33	482	151	116	340	133	105	390	20	9.6	39	
2	1130	34	487	169	120	309	126	96	298	24	10	86	
3	479	38	383	164	142	291	119	86	252	33	9.7	170	
4	291	54	310	155	209	262	112	78	239	38	9.2	121	
5	190	84	254	145	601	240	103	73	320	32	9.2	127	
6	134	87	225	128	1180	231	98	69	527	26	8.8	87	
7	101	74	196	118	1230	216	100	65	427	23	9.6	54	
8	82	68	169	103	841	190	162	72	418	20	11	38	
9	68	61	153	85	583	174	236	74	427	18	9.1	29	
10	59	56	138	91	442	168	195	63	655	18	9.3	25	
11	53	52	126	89	379	171	169	55	598	19	21	21	
12	49	49	146	87	305	175	153	51	405	31	25	39	
13	46	48	202	85	243	858	140	55	300	34	23	35	
14	43	46	244	76	234	1170	128	50	211	30	18	27	
15	42	45	223	75	251	1260	125	47	160	33	16	22	
16	43	46	205	71	274	1050	121	41	124	25	16	35	
17	41	79	190	68	4470	758	111	37	97	23	19	28	
18	38	121	170	68	5650	572	103	34	79	20	30	23	
19	37	136	139	93	2030	553	96	33	65	18	23	24	
20	36	119	131	141	1150	510	92	33	56	16	18	38	
21	35	101	125	129	789	407	138	33	49	15	17	48	
22	34	95	110	118	577	351	195	32	43	15	16	35	
23	34	100	125	111	443	310	194	1700	37	14	15	30	
24	37	92	126	103	382	274	179	1350	34	13	15	26	
25	43	83	118	101	368	241	168	569	30	13	14	22	
26	43	78	96	113	340	218	155	372	27	12	14	19	
27	38	91	96	122	342	201	141	1940	25	11	18	18	
28	35	415	98	100	365	184	129	2570	23	11	35	17	
29	33	1350	93	108	---	168	132	1580	23	10	20	16	
30	33	754	83	116	---	154	120	904	21	9.4	15	16	
31	33	---	92	114	---	144	---	549	---	9.5	18	---	
TOTAL	4108	4489	5735	3397	24056	12150	4173	12816	6360	633.9	501.5	1315	
MEAN	133	150	185	110	859	392	139	413	212	20.4	16.2	43.8	
MAX	1130	1350	487	169	5650	1260	236	2570	655	38	35	170	
MIN	33	33	83	68	116	144	92	32	21	9.4	8.8	16	
CFSM	.66	.74	.92	.54	4.25	1.94	.69	2.04	1.05	.10	.08	.22	
IN.	.76	.83	1.06	.63	4.43	2.24	.77	2.36	1.17	.12	.09	.24	
CAL YR 1985	TOTAL	88398.5		MEAN	242	MAX	2790	MIN	8.7	CFSM	1.20	IN.	16.28
WTR YR 1986	TOTAL	79734.4		MEAN	218	MAX	5650	MIN	8.8	CFSM	1.08	IN.	14.68

## 03416000 WOLF RIVER NEAR BYRDSTOWN

LOCATION.--Lat 36°33'37", long 85°04'23", Pickett County, Hydrologic Unit 05130105, on right bank 0.3 mi upstream from bridge on county road, 0.5 mi upstream from Widow Creek, 3.2 mi east of Byrdstown, 5.4 mi upstream from Lick Creek, and at mile 26.2.

DRAINAGE AREA.--106 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1942 to current year. Prior to June 1943 monthly discharge only, published in WSP 1306.

REVISED RECORD.--WSP 1276: 1943. WSP 1910: Drainage area. WDR TN-82: 1944-81(M).

GAGE.--Water-stage recorder. Datum of gage is 707.54 ft Sandy Hook datum.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--44 years, 189 ft<sup>3</sup>/s, 24.21 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,500 ft<sup>3</sup>/s, Sept. 2, 1982, gage height, 17.14 ft, from rating curve extended above 7,300 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 10.09 ft and 17.14 ft; minimum, 2.0 ft<sup>3</sup>/s, Sept. 17, 1954, gage height, 0.50 ft result of construction at mill dam upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of about 10.8 ft, discharge, about 12,400 ft<sup>3</sup>/s from information by local resident. From flood marks, flood of June 30, 1928, reached a stage 1.5 ft higher than that in March 1929 at a point 12.5 mi upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 17	1615	*3,890	*6.35	No other peak greater than base discharge.			

Minimum discharge, 7.2 ft<sup>3</sup>/s, Aug. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	26	13	170	72	74	136	57	32	132	23	10	44	
2	81	12	154	81	84	124	54	29	103	26	9.1	68	
3	42	15	113	80	122	117	52	29	84	21	8.9	98	
4	28	18	88	80	181	104	50	27	74	19	8.2	48	
5	24	23	75	74	319	95	48	26	68	17	7.7	34	
6	20	25	63	67	446	92	46	26	110	16	7.7	28	
7	18	21	52	60	630	84	45	25	166	15	9.2	24	
8	16	19	44	55	454	74	46	24	227	14	10	21	
9	14	18	40	49	330	70	45	24	361	15	13	19	
10	14	17	36	48	272	69	42	22	455	23	13	18	
11	13	16	35	51	241	74	41	22	248	27	24	17	
12	12	16	42	50	195	80	39	21	261	22	15	22	
13	12	16	127	49	162	425	38	24	185	19	13	22	
14	14	15	194	48	165	436	37	30	133	19	12	21	
15	15	15	152	44	154	626	37	25	103	19	10	18	
16	14	19	129	43	186	502	36	23	81	18	11	19	
17	15	28	112	42	2230	346	35	20	65	18	39	19	
18	15	37	98	44	2350	265	33	19	53	16	22	19	
19	15	30	80	66	749	229	32	19	46	14	15	22	
20	15	26	71	113	432	178	34	19	41	13	13	24	
21	17	23	68	98	301	143	47	19	38	12	14	24	
22	16	25	61	91	229	119	50	17	34	12	11	22	
23	18	24	63	86	181	108	44	781	32	11	11	20	
24	19	23	68	78	156	98	40	945	29	10	13	18	
25	18	22	63	79	134	88	39	453	27	9.9	9.9	17	
26	18	21	54	85	118	82	38	426	25	9.7	9.9	16	
27	17	42	49	83	138	79	36	724	24	9.7	10	15	
28	15	165	50	77	150	73	36	525	22	9.3	13	16	
29	14	395	50	75	---	67	36	343	22	8.9	13	15	
30	14	237	48	78	---	63	34	237	20	8.2	11	14	
31	13	---	52	73	---	60	---	172	---	9.7	15	---	
TOTAL	602	1376	2501	2119	11183	5106	1247	5128	3269	484.4	401.6	782	
MEAN	19.4	45.9	80.7	68.4	399	165	41.6	165	109	15.6	13.0	26.1	
MAX	81	395	194	113	2350	626	57	945	455	27	39	98	
MIN	12	12	35	42	74	60	32	17	20	8.2	7.7	14	
CFSM	.18	.43	.76	.65	3.76	1.56	.39	1.56	1.03	.15	.12	.25	
IN.	.21	.48	.88	.74	3.92	1.79	.44	1.80	1.15	.17	.14	.27	
CAL YR 1985	TOTAL	35542.1		MEAN	97.4	MAX	1250	MIN	9.2	CFSM	.92	IN.	12.47
WTR YR 1986	TOTAL	34199.0		MEAN	93.7	MAX	2350	MIN	7.7	CFSM	.88	IN.	12.00

## CUMBERLAND RIVER BASIN

03417500 CUMBERLAND RIVER AT CELINA, TN

LOCATION.--Lat 36°33'15", long 85°30'52", Clay County, Hydrologic Unit 05130106, on right bank at State Highway 52 bridge, 0.5 mi northwest of courthouse in Celina, 600 ft downstream from Obey River, and at mile 380.8.

DRAINAGE AREA.--7,307 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1922 to current year. Gage-height records collected at same site 1903-54 are in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 893: 1923-38. WSP 1276: 1924. WSP 1306: 1943 (monthly runoff). WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 489.00 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 20, 1930, nonrecording gage at site 400 ft downstream at same datum. Since Feb. 2, 1973, auxiliary water-stage recorder 15.8 mi downstream from base gage at same datum.

REMARKS.--Estimated daily discharges: Oct. 24, Dec. 5-10, Feb. 25-26, May 22, June 15-19, July 10. Records fair, except those for periods of low fall and fragmentary record, October to February which are poor. Flow regulated by Lake Cumberland and Dale Hollow Lake (see page 88). Periodic observations of water temperature are published in this report as miscellaneous water quality data. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--63 years (water years 1922-1980, 1982-1986), 11,700 ft<sup>3</sup>/s, 21.74 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 145,000 ft<sup>3</sup>/s, Dec. 29, 1926, maximum gage height, 57.25 ft, Dec. 29, 1926, from graph based on gage readings; minimum daily, 69 ft<sup>3</sup>/s, Sept. 2, 11-14, 1925; minimum gage height observed, 0.20 ft, Sept. 2, 11-14, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1793, 59.2 ft in March 1826, from Cumberland River profile.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 27,700 ft<sup>3</sup>/s, Feb. 18, gage height, 19.66 ft; minimum daily, 942 ft<sup>3</sup>/s, Oct. 28; minimum recorded gage height, 10.46 ft, Mar. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1690	3430	5250	17200	6440	4980	4900	9730	3340	6670	9030	2810
2	3090	3000	4560	18500	4600	5550	5620	9850	4270	8740	7010	4480
3	3130	2490	6950	17600	4200	2980	5910	8880	7640	8780	4630	5560
4	2920	3300	12800	10800	10600	3220	5470	3920	9390	6690	5210	5980
5	2250	5290	13500	8970	11100	4160	5700	2960	7000	4570	7080	5770
6	2740	5010	13000	8330	8550	4100	3260	5400	7090	1660	8600	5450
7	1230	5170	12000	12700	10300	3710	2190	6520	6120	4440	8780	1410
8	2950	4600	10500	14900	8390	3220	5670	6180	4520	6560	8610	2450
9	3610	4700	11000	15700	5920	3570	7350	6600	4190	8450	7010	7330
10	2810	3900	13200	14700	3550	2660	7470	6360	5780	7880	5380	8740
11	3490	2940	16100	8270	4860	5560	7430	4520	5210	8070	5210	9400
12	2670	3340	16800	4560	6760	6320	6730	4370	3820	6340	7610	9530
13	1110	3700	18500	4600	7010	23600	3380	6020	4080	4890	8860	8620
14	1080	3890	17000	6210	7400	16300	4080	7280	3030	5200	8960	4760
15	2650	3740	15000	7260	4090	8980	6930	6740	2400	6690	9070	1970
16	3340	4240	16800	6930	4110	5130	8890	6990	3000	7330	7300	4420
17	2980	3850	18100	3870	13200	2780	9610	6430	3800	7790	4950	5010
18	3450	4340	17000	4080	24700	3030	10100	4110	3800	7640	3820	5540
19	2740	6810	15000	3980	11700	3030	8440	4100	3850	5400	7360	5750
20	1160	7220	18300	2910	4540	2940	3980	6000	4850	4120	8420	6640
21	1430	6570	15900	5230	3340	4750	4620	6630	3820	4410	8650	2880
22	3020	7120	17600	6460	3440	6050	9260	6600	1700	6260	8910	2060
23	3990	6410	19500	5850	4380	4520	10800	6520	3490	7200	8030	3280
24	4000	5590	18400	6560	5540	2530	10700	6170	5500	7640	4280	4000
25	3930	3780	11600	5320	5900	3310	9570	3790	6010	7130	3070	4880
26	3470	5050	15200	3210	5100	3580	7620	2620	6540	5920	6840	4340
27	1990	9130	19900	4210	6550	3380	3890	4510	6910	4340	9150	4050
28	942	21000	15600	13100	5180	3560	3460	5620	5540	4890	9150	1810
29	2030	11400	13100	16400	---	3780	7970	5610	3360	7400	8900	2760
30	3310	6290	12300	8710	---	2790	9380	4950	6230	8690	8260	5600
31	3760	---	16100	6260	---	2230	---	3640	---	9640	4500	---
TOTAL	82962	167300	446560	273380	201450	156300	200380	179620	146280	201430	222640	147280
MEAN	2676	5577	14410	8819	7195	5042	6679	5794	4876	6498	7182	4909
MAX	4000	21000	19900	18500	24700	23600	10800	9850	9390	9640	9150	9530
MIN	942	2490	4560	2910	3340	2230	2190	2620	1700	1660	3070	1410

CAL YR 1985 TOTAL 2887535 MEAN 7911 MAX 23400 MIN 942 MEAN± 7333 CFSM± 1.00 IN.± 13.62  
WTR YR 1986 TOTAL 2425582 MEAN 6645 MAX 24700 MIN 942 MEAN± 6510 CFSM± .89 IN.± 12.09

± Adjusted for change in contents in Lake Cumberland and Dale Hollow Lake.

NOTE.--Contents (cfs/days) for adjustments furnished by U.S. Army Corps of Engineers.



## CUMBERLAND RIVER BASIN

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## 03418070 ROARING RIVER ABOVE GAINESBORO, TN

LOCATION.--Lat 36°21'04", long 85°32'45", Jackson County, Hydrologic Unit 05130106, near left bank of downstream end of county road bridge, 1.1 mi upstream from Blackburn Fork, 6.3 mi east of Gainesboro, and at mile 9.1.

DRAINAGE AREA.--210 mi<sup>2</sup>, includes 34 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 520.56 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair, except those below 5.0 ft<sup>3</sup>/s, which are poor. Periodic observations of water temperature are published in this report as miscellaneous water quality data. U. S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--12 years, 256 ft<sup>3</sup>/s, 16.55 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft<sup>3</sup>/s, Mar. 12, 1975, gage height, 21.83 ft, from high-water marks; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 18	0230	*4,390	*11.01				

No flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	4.0	.04	142	1.6	1.0	64	24	.00	81	1.2	.00	.00	
2	3.3	.00	168	1.6	.53	53	22	.00	49	.94	.00	3.6	
3	.50	2.8	95	1.6	2.9	51	19	.00	88	.02	.00	.23	
4	.00	28	50	1.3	4.9	46	15	.00	381	.00	.00	.96	
5	.00	28	31	1.0	58	41	10	.00	173	.00	.00	.08	
6	.00	5.3	22	.64	458	39	7.6	.00	115	.00	.00	.00	
7	.00	.96	10	.53	425	34	14	.00	409	.00	.00	.00	
8	.00	.40	5.9	.07	268	30	22	.00	1020	.00	.00	.00	
9	.00	.20	5.9	.03	149	28	30	.00	772	.00	.00	.00	
10	.00	.06	1.8	.18	80	26	18	.00	990	.03	.00	.00	
11	.00	.00	1.3	.28	65	27	12	.00	534	10	.00	.00	
12	.00	.00	5.9	.28	38	36	7.3	.00	513	.47	.00	.03	
13	.00	.00	22	.23	23	1490	2.7	.00	333	.00	.00	.00	
14	.00	.00	51	.07	26	1180	1.9	.00	181	.00	.00	.00	
15	.45	.00	34	.08	51	1010	1.5	.00	103	.00	.00	.00	
16	.00	.72	23	.00	116	769	1.1	.00	63	.00	.00	.00	
17	.00	1.1	14	.14	2660	510	1.0	.00	43	.00	.00	.00	
18	.00	.85	7.7	.23	3040	386	1.0	.00	30	.00	.00	.00	
19	.00	1.4	1.8	1.3	1270	359	.81	.00	20	.00	.00	8.8	
20	3.0	.33	2.1	1.1	755	290	1.4	.00	13	.00	.00	3.9	
21	13	.02	1.8	1.0	535	197	4.8	.00	3.4	.00	.00	18	
22	.96	.53	1.6	.92	394	145	14	.00	.63	.00	.00	.52	
23	.98	.31	2.1	.67	274	118	3.9	503	.24	.00	.00	.00	
24	3.0	.13	1.8	.44	213	92	1.7	423	.05	.00	.00	.00	
25	.69	.28	1.3	.52	163	69	1.3	122	.00	.00	.00	.00	
26	.06	.15	.28	.76	118	57	.98	122	.00	.00	.00	.00	
27	.00	19	.92	.23	103	50	.70	749	.00	.00	.00	.00	
28	.00	102	.64	.00	91	43	.83	631	.00	.00	.00	.00	
29	.00	532	.44	1.0	---	37	.73	592	.00	.00	.00	.00	
30	.00	245	.17	.28	---	33	.16	334	.00	.00	.00	.00	
31	.00	---	1.8	.23	---	29	---	160	---	.00	.00	---	
TOTAL	29.94	969.58	707.25	18.31	11382.33	7339	241.41	3636.00	5915.32	12.66	.00	36.12	
MEAN	.97	32.3	22.8	.59	407	237	8.05	117	197	.41	.00	1.20	
MAX	13	532	168	1.6	3040	1490	30	749	1020	10	.00	18	
MIN	.00	.00	.17	.00	.53	26	.16	.00	.00	.00	.00	.00	
CFSM	.00	.15	.11	.00	1.94	1.13	.04	.56	.94	.00	.00	.01	
IN.	.01	.17	.13	.00	2.02	1.30	.04	.64	1.05	.00	.00	.01	
CAL YR 1985	TOTAL	31297.87		MEAN	85.7	MAX	1440	MIN	.00	CFSM	.41	IN.	5.54
WTR YR 1986	TOTAL	30287.92		MEAN	83.0	MAX	3040	MIN	.00	CFSM	.40	IN.	5.37

## CUMBERLAND RIVER BASIN

03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, TN

LOCATION.--Lat 36°17'12", long 85°56'27", Smith County, Hydrologic Unit 05130108, on right bank in powerhouse at Cordell Hull Dam, 2.7 mi north of Carthage, and at mile 313.5.

DRAINAGE AREA.--8,095 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year. Equivalent record prior to 1981 published in annual reports of Tennessee Valley Authority entitled "Operation of TVA Reservoirs".

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by Lake Cumberland (station 03413500) and Dale Hollow Lake (station 03416500).

COOPERATION.--Records provided by U. S. Army Corps of Engineers.

AVERAGE DISCHARGE.--14 years, 13,700 ft<sup>3</sup>/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 116,000 ft<sup>3</sup>/s, Mar. 13, 1975; no flow Nov. 2, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 31,300 ft<sup>3</sup>/s, Feb. 18; minimum daily, 2,160 ft<sup>3</sup>/s, Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2160	4790	8440	14900	4940	5600	3980	9780	3330	6370	8300	3080
2	2480	5100	7050	17500	4780	5130	5670	8830	4620	8720	7070	4350
3	3700	3150	10200	17700	4170	3730	6060	8520	5860	8820	5020	4400
4	4330	2500	9180	11200	6430	3730	5980	5550	11100	5960	4630	8000
5	4010	6440	13000	10100	11000	4500	5760	3100	9550	5740	6020	6610
6	2780	5440	15700	8560	11700	3730	4020	3080	6770	2780	7410	4680
7	2500	8580	12300	8930	9090	4420	2670	4970	6820	3890	8730	3390
8	3130	6580	11100	13200	10200	4150	4650	5710	6750	4800	7780	3700
9	4530	5190	9730	15300	7570	3360	7130	5550	6540	6660	6030	4680
10	4080	4200	11300	14300	5360	2680	7960	5550	11600	8860	5030	8020
11	4120	3540	13400	9650	4070	4740	7980	4310	8870	7130	4320	9880
12	3430	3230	15600	6060	6800	6540	7560	3700	8800	6020	6320	8510
13	2180	4220	16700	5370	8760	28000	5000	4320	6430	4620	9300	8670
14	2180	4220	16000	5630	7480	21900	2980	5880	4660	4020	8130	5790
15	2500	3890	17500	5890	9430	10700	5780	6230	3390	5720	8510	3430
16	3440	3570	17300	6870	6920	10300	7160	6890	3080	7100	6970	3080
17	4450	3230	17100	6090	15500	4860	7600	4710	3080	7160	5000	6040
18	4480	5080	18300	3690	31300	4060	7860	4000	3070	7830	4010	4360
19	4120	6660	18600	2630	17700	4050	5880	5550	4350	5420	5310	5000
20	3130	7690	17500	6120	8690	5230	3550	5000	4000	4000	7690	5000
21	2530	8450	16800	3690	5380	5630	2270	5920	4070	4000	8440	4050
22	2550	8680	15500	5680	4750	6610	4520	6430	4000	6070	8790	3130
23	3780	7570	15500	6890	5880	5370	7170	11300	3390	6390	7430	2800
24	4390	7060	16700	7360	7020	4410	8290	11000	4640	6780	5000	3440
25	4050	5960	20200	5640	7290	4050	8520	7900	6390	6680	3390	4480
26	5610	5740	21600	5090	8640	4030	7020	4930	6750	5650	5000	4750
27	4040	6760	18500	4700	7850	4030	4590	7730	6750	4630	6720	3750
28	3740	25000	17200	7340	6540	4390	2810	7010	5640	4630	9150	2780
29	2800	15100	13300	12900	---	3690	5000	10500	3700	5680	8380	3110
30	4060	8200	10600	12200	---	2990	4930	8380	3700	7350	8360	3750
31	3750	---	11200	8650	---	3670	---	5640	---	9360	5530	---
TOTAL	109030	195820	453100	269830	245240	190280	170350	197970	171700	188840	207770	146710
MEAN	3517	6527	14620	8704	8759	6138	5678	6386	5723	6092	6702	4890
MAX	5610	25000	21600	17700	31300	28000	8520	11300	11600	9360	9300	9880
MIN	2160	2500	7050	2630	4070	2680	2270	3080	3070	2780	3390	2780
CAL YR 1985	TOTAL	3158230		MEAN	8653	MAX	25000	MIN	2150			
WTR YR 1986	TOTAL	2546640		MEAN	6977	MAX	31300	MIN	2160			

## CUMBERLAND RIVER BASIN

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03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1980 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to current year.

WATER TEMPERATURE: October 1980 to current year.

DISSOLVED OXYGEN: October 1980 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1980.

REMARKS.--Flow regulated by Cordell Hull Dam and other reservoirs above station. Interruptions in the record were due to monitor malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 255 microsiemens, Dec. 30, 31, 1981; minimum, 140 microsiemens, Sept. 3, 1984.

WATER TEMPERATURE: Maximum, 23.5°C, July 31, 1986; minimum, 2.0°C, Jan. 12, 15-21, 1981.

DISSOLVED OXYGEN: Maximum, 15.5 mg/L, Mar. 4, 1983; minimum, 4.1 mg/L, Sept. 13, 23, 1984, June 29, 1986.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 239 microsiemens, June 29, July 6; minimum, 163 microsiemens, Sept. 24.

WATER TEMPERATURE: Maximum, 23.5°C, July 31; minimum, 4.0°C, Jan. 29.

DISSOLVED OXYGEN: Maximum, 12.5 mg/L, Apr. 4; minimum, 4.1 mg/L, June 29.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	183	178	180	194	192	193	226	216	219	---	---	---
2	186	179	181	195	191	193	219	214	216	---	---	---
3	191	180	183	196	192	193	217	212	214	---	---	---
4	183	180	181	196	190	193	215	209	211	---	---	---
5	186	180	181	201	191	192	209	207	208	---	---	---
6	188	181	182	204	190	194	211	208	209	---	---	---
7	189	181	183	207	191	194	222	209	217	---	---	---
8	188	181	183	203	193	196	224	222	223	204	203	204
9	188	183	184	208	193	196	221	216	218	206	204	205
10	188	181	184	202	194	196	215	210	212	209	205	207
11	190	181	184	200	195	197	210	209	210	210	208	209
12	202	182	185	200	196	197	210	206	209	215	208	209
13	198	182	186	203	193	197	212	204	206	216	209	210
14	192	183	186	202	195	198	205	202	204	218	208	211
15	197	182	186	203	198	201	203	201	202	218	209	211
16	197	183	185	206	201	203	202	200	201	218	209	211
17	188	182	184	209	203	205	209	202	205	218	211	213
18	187	184	185	211	203	208	209	206	207	222	211	215
19	197	185	188	216	206	209	207	206	207	216	212	213
20	197	186	189	213	209	211	207	205	206	220	212	214
21	195	189	191	217	212	214	208	203	205	226	214	219
22	196	190	193	223	212	215	206	203	204	225	218	219
23	196	191	193	218	213	214	205	202	203	223	218	219
24	196	191	193	220	214	216	203	202	202	224	219	221
25	199	193	194	226	216	218	202	201	201	224	219	220
26	199	193	194	224	218	220	206	200	203	225	218	220
27	195	193	194	222	217	219	216	205	206	221	217	219
28	198	192	194	223	218	221	---	---	---	226	217	219
29	195	192	194	218	215	217	---	---	---	221	218	219
30	197	192	193	237	216	220	---	---	---	222	219	220
31	195	192	193	---	---	---	---	---	---	229	219	221
MONTH	202	178	187	237	190	205	226	200	208	---	---	---

## CUMBERLAND RIVER BASIN

03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	226	218	220	193	187	189	216	209	212	215	207	209
2	226	217	220	197	188	193	216	211	214	215	208	210
3	224	218	220	198	194	197	218	213	215	211	209	210
4	223	217	219	205	197	201	219	212	216	218	210	211
5	221	216	218	211	203	207	218	212	215	218	210	213
6	219	214	216	211	205	208	221	216	217	219	215	216
7	219	214	215	216	208	211	221	217	219	218	214	216
8	217	215	216	216	209	212	230	218	224	220	213	215
9	225	215	216	220	209	212	228	225	225	217	213	214
10	224	216	217	222	211	216	228	223	225	217	212	214
11	221	215	217	227	221	223	228	223	225	218	211	213
12	220	215	218	227	220	222	226	223	224	217	208	212
13	224	217	219	224	218	221	226	220	222	218	207	213
14	225	217	219	224	220	222	224	212	219	211	205	207
15	227	220	223	223	220	221	218	215	217	209	205	206
16	227	222	224	220	209	215	218	215	216	210	204	206
17	229	222	224	211	204	207	220	215	216	211	201	207
18	226	222	224	205	200	202	218	213	214	211	204	207
19	229	225	228	201	195	197	218	211	212	212	205	207
20	237	218	225	195	191	193	218	209	212	211	205	207
21	226	213	218	192	189	190	214	208	210	209	204	205
22	220	210	214	191	187	188	214	207	209	211	204	206
23	216	208	211	188	184	185	215	206	207	207	198	204
24	215	206	209	188	183	185	213	205	207	206	203	205
25	207	202	204	191	185	187	211	205	207	212	205	206
26	202	196	198	189	185	187	212	204	206	214	193	203
27	203	190	195	193	187	191	217	205	207	209	200	203
28	192	188	190	195	190	192	217	205	208	209	192	200
29	---	---	---	201	192	196	213	205	207	207	199	202
30	---	---	---	206	198	201	212	205	207	212	196	205
31	---	---	---	210	201	205	---	---	---	212	185	202
MONTH	237	188	216	227	183	202	230	204	214	220	185	208
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	208	194	199	219	204	215	213	197	204	218	202	210
2	211	191	199	217	209	213	207	193	199	217	200	208
3	211	196	203	220	205	210	205	193	198	210	198	202
4	214	190	206	217	204	209	199	192	194	215	194	200
5	217	206	210	224	203	209	196	189	192	217	192	200
6	213	209	211	239	218	228	199	189	192	210	190	195
7	220	210	215	234	206	225	199	187	190	208	178	193
8	218	205	214	235	202	221	201	186	190	216	183	194
9	228	220	222	229	199	216	197	184	188	210	174	187
10	223	215	217	229	197	210	194	182	187	214	183	190
11	215	213	214	221	199	208	197	183	188	202	181	188
12	213	208	210	220	200	209	191	178	183	218	178	194
13	211	203	206	219	201	207	185	177	179	212	184	192
14	208	200	202	220	201	206	183	177	179	204	184	188
15	204	200	201	219	201	208	183	175	178	219	184	196
16	216	198	202	223	203	209	185	173	176	219	181	199
17	224	215	219	220	205	209	186	172	177	211	179	195
18	224	204	214	230	207	212	204	170	183	213	173	188
19	206	196	201	236	205	220	193	167	178	206	174	187
20	210	197	203	225	205	210	213	194	209	201	167	182
21	219	203	208	230	205	212	221	210	215	210	168	178
22	221	204	210	223	207	212	222	212	216	204	166	183
23	224	204	213	230	206	213	220	205	212	199	165	174
24	227	203	212	225	208	213	224	201	213	210	163	188
25	209	199	204	220	206	210	221	207	212	221	187	195
26	224	211	217	217	205	209	225	206	213	216	183	197
27	238	216	225	223	204	211	219	203	210	222	188	200
28	238	217	225	222	206	213	217	203	210	226	184	200
29	239	222	229	215	201	210	216	207	209	218	188	203
30	225	214	221	219	198	206	213	206	208	223	183	206
31	---	---	---	208	196	200	216	205	210	---	---	---
MONTH	239	190	211	239	196	212	225	167	197	226	163	194



## CUMBERLAND RIVER BASIN

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03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	20.0	19.0	19.5	18.0	18.0	18.0	13.5	13.5	13.5	---	---	---
2	19.5	18.0	19.0	18.0	17.5	18.0	13.5	12.5	13.0	---	---	---
3	19.0	18.5	19.0	17.5	17.0	17.0	12.5	12.0	12.5	---	---	---
4	19.0	18.0	18.5	17.0	16.5	17.0	12.0	12.0	12.0	---	---	---
5	18.5	17.5	18.0	16.5	16.0	16.5	12.0	11.5	12.0	---	---	---
6	18.5	17.0	17.5	16.0	16.0	16.0	11.5	11.0	11.5	---	---	---
7	18.0	17.0	17.5	16.0	15.5	15.5	11.0	10.5	10.5	---	---	---
8	18.5	17.0	17.5	15.5	15.0	15.0	10.5	9.5	10.0	6.0	6.0	6.0
9	18.0	17.0	17.5	15.0	14.5	14.5	9.5	9.0	9.5	6.0	5.5	6.0
10	18.0	17.0	17.5	15.0	14.5	14.5	9.5	9.0	9.0	6.0	5.5	6.0
11	17.5	17.0	17.5	15.5	14.5	15.0	10.0	9.5	10.0	5.5	5.5	5.5
12	17.5	17.0	17.5	15.5	14.5	14.5	10.0	10.0	10.0	5.5	5.5	5.5
13	17.5	17.0	17.5	15.0	14.5	14.5	10.0	10.0	10.0	5.5	5.0	5.5
14	17.5	17.0	17.5	14.5	14.0	14.5	10.0	9.5	9.5	5.5	5.0	5.5
15	17.5	17.0	17.5	14.5	14.0	14.0	9.5	9.5	9.5	5.5	4.5	5.0
16	17.5	17.0	17.0	14.5	14.0	14.0	9.5	9.0	9.5	5.5	4.5	5.5
17	17.5	17.0	17.5	14.0	14.0	14.0	9.5	9.0	9.0	5.5	5.5	5.5
18	18.5	17.0	17.5	15.0	13.5	14.5	9.0	8.0	8.5	6.0	5.5	5.5
19	18.0	17.5	17.5	15.0	14.0	14.5	8.0	7.5	7.5	6.0	5.5	6.0
20	18.0	17.5	17.5	15.0	14.0	14.5	7.5	7.5	7.5	6.0	5.5	5.5
21	18.0	17.5	17.5	14.0	13.5	13.5	7.5	7.0	7.5	6.5	5.5	6.0
22	17.5	17.0	17.5	14.0	13.5	13.5	7.5	7.0	7.5	6.5	6.0	6.5
23	18.0	17.5	17.5	13.5	13.5	13.5	7.5	7.5	7.5	6.5	6.0	6.0
24	18.0	18.0	18.0	13.5	13.0	13.5	7.5	7.5	7.5	6.5	5.5	6.0
25	18.5	17.5	18.0	13.5	13.0	13.5	7.5	7.0	7.0	6.5	6.0	6.0
26	18.5	17.0	18.0	14.0	13.5	13.5	7.0	6.5	7.0	6.0	5.5	6.0
27	18.5	18.5	18.5	14.0	14.0	14.0	7.0	6.5	6.5	5.5	4.5	5.0
28	19.0	18.0	18.5	14.0	14.0	14.0	---	---	---	5.0	4.5	4.5
29	18.5	18.0	18.5	14.0	13.5	13.5	---	---	---	5.0	4.0	4.5
30	18.5	18.0	18.0	13.5	13.5	13.5	---	---	---	4.5	4.5	4.5
31	18.5	18.0	18.0	---	---	---	---	---	---	5.0	4.5	4.5
MONTH	20.0	17.0	18.0	18.0	13.0	14.5	13.5	---	9.5	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	5.0	4.5	5.0	8.5	7.5	8.0	13.5	12.5	13.0	15.0	13.0	14.0
2	5.5	5.0	5.0	8.0	7.5	8.0	13.5	12.5	13.0	16.0	13.0	14.0
3	6.0	5.0	5.5	8.5	7.5	8.0	14.0	12.5	13.5	15.5	14.0	15.0
4	6.0	5.5	5.5	8.0	8.0	8.0	14.0	13.0	13.5	15.5	13.5	15.0
5	6.0	5.5	6.0	8.0	8.0	8.0	14.5	14.0	14.0	16.5	14.5	15.0
6	7.0	6.0	6.0	8.5	7.5	8.0	15.0	14.0	14.0	17.0	14.5	15.5
7	7.0	6.5	7.0	8.0	7.5	8.0	15.0	13.5	14.0	16.5	15.0	15.5
8	7.0	7.0	7.0	8.0	7.0	7.5	15.0	13.5	14.0	16.5	15.0	15.5
9	7.0	7.0	7.0	8.5	7.0	7.5	14.5	13.5	14.0	16.0	15.0	15.5
10	7.0	6.5	7.0	9.5	8.0	8.5	15.5	14.0	15.0	16.5	15.0	16.0
11	7.0	6.5	6.5	9.0	8.5	9.0	16.0	14.0	15.5	16.0	15.0	15.5
12	6.5	6.0	6.5	10.0	9.0	9.0	16.0	14.5	15.5	16.5	15.0	15.5
13	6.5	6.0	6.0	10.0	9.0	9.5	16.0	15.0	15.5	16.0	15.0	15.5
14	6.5	6.0	6.0	10.0	9.5	10.0	16.0	15.0	15.5	17.0	15.0	16.0
15	6.0	5.5	6.0	11.0	10.0	10.5	15.5	14.0	15.0	18.0	16.0	16.5
16	6.5	5.5	6.0	11.0	10.5	11.0	15.0	14.0	14.5	18.0	15.5	16.5
17	6.5	6.0	6.0	12.0	10.5	11.5	15.0	14.5	15.0	18.0	16.5	17.5
18	6.0	5.5	5.5	12.5	11.5	12.0	15.0	14.0	14.5	18.0	16.5	17.5
19	6.5	5.5	6.0	12.5	12.0	12.5	14.5	14.0	14.0	17.5	16.5	17.0
20	7.5	6.5	7.0	12.5	11.5	12.0	14.5	13.5	14.0	17.5	16.5	17.0
21	8.0	7.5	7.5	12.0	11.5	11.5	14.0	13.0	13.5	18.0	16.5	17.0
22	7.5	7.0	7.5	11.5	11.0	11.5	14.0	12.5	13.0	18.5	16.5	17.5
23	8.5	7.0	8.0	12.0	10.5	11.5	14.5	12.0	13.5	19.5	17.5	18.0
24	8.0	8.0	8.0	12.0	10.5	11.5	14.5	13.5	14.0	19.5	17.5	18.5
25	8.0	8.0	8.0	12.5	11.5	11.5	14.0	13.0	13.5	19.0	17.5	18.0
26	8.5	8.0	8.0	13.5	11.0	12.5	14.0	13.0	13.5	18.0	17.5	18.0
27	8.5	8.0	8.5	13.0	12.0	12.5	15.0	13.0	13.5	18.5	17.5	18.0
28	8.5	8.0	8.0	13.0	11.5	12.5	14.0	12.5	13.0	18.0	17.0	17.5
29	---	---	---	13.5	12.0	12.5	13.5	12.5	13.0	18.0	16.5	17.5
30	---	---	---	14.5	12.0	13.0	14.0	13.0	13.5	17.5	16.5	17.0
31	---	---	---	13.5	11.5	13.0	---	---	---	17.0	16.5	16.5
MONTH	8.5	4.5	6.5	14.5	7.0	10.5	16.0	12.0	14.0	19.5	13.0	16.5

## CUMBERLAND RIVER BASIN

03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	18.5	16.5	16.5	23.0	21.0	21.5	23.0	20.5	21.5	19.5	19.0	19.5
2	17.0	16.5	17.0	22.5	21.0	21.5	22.0	20.0	21.0	19.0	18.5	19.0
3	17.5	16.5	17.0	22.5	20.5	21.5	21.5	20.0	20.5	20.0	18.5	19.0
4	19.0	17.0	18.0	22.5	21.0	21.5	20.5	19.5	20.0	20.5	18.5	19.5
5	19.5	17.5	18.5	23.0	21.0	21.5	21.5	19.5	20.5	20.0	19.0	19.5
6	19.5	18.0	18.5	22.0	21.0	21.5	21.0	20.0	20.5	19.0	18.5	19.0
7	20.0	18.0	18.5	21.5	20.5	21.0	21.5	19.5	20.5	18.5	18.0	18.0
8	19.5	18.0	18.5	21.5	20.5	20.5	20.5	19.5	20.0	18.5	17.5	18.0
9	19.0	18.0	18.5	22.0	20.0	20.5	20.5	19.0	19.5	18.5	17.5	18.0
10	20.5	18.0	19.5	22.0	19.5	20.5	20.0	18.5	19.0	20.5	18.0	19.0
11	19.5	18.5	19.0	22.0	19.5	20.5	19.0	18.5	19.0	20.0	18.0	19.0
12	19.0	18.0	18.5	21.0	19.5	20.5	20.0	18.5	19.0	19.5	18.0	19.0
13	19.0	17.5	18.0	20.0	19.0	19.5	20.5	18.5	19.5	19.5	17.5	18.5
14	18.0	17.0	18.0	20.5	19.0	19.5	21.0	19.0	19.5	20.0	18.5	19.0
15	18.5	17.5	18.0	21.5	19.5	20.0	21.0	19.0	20.0	19.5	19.0	19.0
16	19.0	17.5	18.5	21.5	19.5	20.5	20.0	18.5	19.0	20.5	19.0	19.5
17	20.0	18.5	19.0	22.0	19.5	20.5	19.5	18.5	19.0	20.5	18.5	19.5
18	20.0	18.0	19.0	22.0	20.0	21.0	19.5	18.5	19.0	21.5	19.0	19.5
19	20.5	18.5	19.5	21.5	19.5	20.5	20.0	18.5	19.0	19.5	19.0	19.0
20	20.0	19.5	19.5	20.0	19.0	19.5	21.0	18.5	19.5	19.0	18.5	18.5
21	21.0	19.5	20.0	20.0	19.0	19.5	21.0	19.0	20.0	18.5	18.5	18.5
22	20.5	20.0	20.0	21.0	19.0	20.0	21.0	19.0	20.0	19.0	18.5	18.5
23	21.0	19.5	20.0	21.5	19.5	20.0	20.5	19.0	19.5	19.5	18.0	18.5
24	21.0	19.5	20.0	22.0	19.5	20.5	19.5	18.5	19.0	19.0	18.5	18.5
25	22.0	19.5	20.5	21.5	20.0	20.5	19.5	18.0	19.0	19.5	18.0	19.0
26	21.5	20.0	21.0	21.5	19.5	20.5	20.0	18.5	19.0	19.5	18.0	18.5
27	21.5	20.5	21.0	20.0	19.5	19.5	20.0	18.5	19.0	19.0	18.5	18.5
28	22.5	20.5	21.0	20.5	19.5	20.0	20.5	18.5	19.5	19.5	18.5	19.0
29	21.5	20.5	21.0	21.0	19.5	20.0	21.0	19.0	20.0	20.0	18.5	19.0
30	22.0	20.5	21.0	22.0	19.5	20.5	21.0	19.0	20.0	20.0	19.0	19.5
31	---	---	---	23.5	20.0	21.0	20.5	19.0	19.5	---	---	---
MONTH	22.5	16.5	19.0	23.5	19.0	20.5	23.0	18.0	19.5	21.5	17.5	19.0

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.7	7.0	7.4	7.1	6.7	6.9	8.0	7.4	7.8	---	---	---
2	7.7	7.3	7.5	7.4	6.4	6.7	8.1	7.8	8.0	---	---	---
3	7.7	6.7	7.5	6.8	6.0	6.4	8.1	7.8	7.9	---	---	---
4	7.8	7.1	7.5	7.0	6.2	6.5	8.0	7.3	7.7	---	---	---
5	7.7	7.2	7.5	7.2	6.2	6.8	7.5	7.1	7.2	---	---	---
6	8.1	7.5	7.8	7.2	6.4	7.1	7.5	7.1	7.3	---	---	---
7	8.0	7.2	7.7	7.3	6.4	7.2	7.9	7.5	7.7	---	---	---
8	8.5	7.6	8.0	7.4	6.8	7.2	8.3	7.9	8.1	9.1	9.0	9.0
9	8.9	7.5	8.4	7.6	6.5	7.3	8.5	8.3	8.4	9.1	9.0	9.0
10	8.6	8.1	8.4	7.7	7.1	7.5	8.3	8.1	8.2	9.1	9.0	9.1
11	8.8	7.5	8.1	8.1	7.0	7.6	8.1	8.0	8.0	9.2	9.1	9.2
12	8.2	6.4	7.9	7.6	6.2	7.2	8.1	8.0	8.0	9.4	9.0	9.2
13	8.5	6.8	7.7	7.8	6.9	7.5	8.2	7.9	8.1	9.5	9.2	9.4
14	8.0	6.9	7.6	8.2	6.7	7.7	8.4	8.2	8.3	9.6	9.0	9.4
15	8.0	6.4	7.4	8.1	7.2	7.7	8.4	8.3	8.4	9.7	9.3	9.5
16	8.3	7.3	7.7	7.8	7.1	7.6	8.4	8.3	8.3	9.7	9.3	9.6
17	8.3	7.3	7.9	7.8	7.0	7.5	8.5	8.3	8.4	9.7	9.1	9.5
18	8.5	7.7	8.0	8.5	7.0	7.7	8.8	8.4	8.6	9.7	9.0	9.5
19	8.2	6.8	7.7	8.4	7.5	7.9	8.9	8.8	8.9	9.8	9.4	9.7
20	7.9	6.4	7.3	8.2	7.8	7.9	9.0	8.9	8.9	9.9	9.2	9.7
21	7.5	4.8	6.9	8.2	7.7	8.0	9.4	8.9	9.0	9.9	9.3	9.7
22	7.3	6.1	6.8	8.2	7.7	8.1	9.0	8.9	8.9	9.9	9.5	9.7
23	7.2	6.5	6.9	8.4	8.0	8.3	9.0	8.9	8.9	9.8	9.5	9.7
24	7.4	6.0	7.0	8.4	7.9	8.3	9.0	8.9	8.9	9.8	9.5	9.7
25	7.4	6.6	7.0	8.5	7.5	8.2	9.2	9.0	9.1	9.8	9.5	9.8
26	7.3	6.7	7.1	8.3	7.7	8.1	9.7	9.1	9.4	9.8	9.4	9.7
27	7.2	6.9	7.0	8.3	7.7	8.1	9.8	9.3	9.7	10.0	9.7	9.8
28	7.6	7.0	7.2	8.0	7.6	7.7	---	---	---	10.1	9.5	9.9
29	7.7	7.1	7.3	8.0	7.8	7.9	---	---	---	10.1	9.9	10.0
30	7.5	6.9	7.2	8.1	7.4	7.9	---	---	---	10.1	10.0	10.1
31	7.3	6.8	7.0	---	---	---	---	---	---	10.1	9.7	10.1
MONTH	8.9	4.8	7.5	8.5	6.0	7.6	9.8	7.1	8.4	---	---	---

03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, TN--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	10.2	9.6	10.0	9.4	8.9	9.2	11.3	9.7	10.6	11.2	10.0	10.8
2	10.3	9.6	10.1	9.4	9.0	9.3	12.4	9.5	10.7	11.4	10.2	10.7
3	10.5	9.7	10.1	9.6	9.1	9.4	12.3	10.7	11.4	10.9	10.6	10.8
4	10.3	9.9	10.2	9.7	9.1	9.5	12.5	11.0	11.7	10.9	10.1	10.6
5	10.4	10.0	10.3	9.8	9.1	9.6	12.1	10.7	11.2	10.7	10.0	10.4
6	10.3	10.0	10.1	10.1	9.5	9.9	11.0	9.9	10.6	10.4	8.4	9.6
7	10.1	9.8	10.0	10.5	9.9	10.3	10.6	9.5	10.1	9.2	8.5	8.8
8	10.0	9.9	10.0	10.9	10.2	10.6	10.2	8.8	9.5	9.4	8.0	8.8
9	10.0	9.8	10.0	11.0	9.7	10.7	10.7	8.8	9.2	9.3	8.0	8.9
10	10.0	9.7	9.9	11.3	10.7	11.1	9.3	8.5	9.0	9.5	8.2	8.9
11	10.0	9.7	9.9	11.5	10.6	11.2	9.2	8.3	8.8	9.3	7.9	8.8
12	9.9	9.7	9.8	11.7	10.3	11.3	9.3	8.3	8.9	9.5	8.3	9.2
13	9.8	9.3	9.6	11.8	11.4	11.6	9.5	8.6	9.1	9.6	8.5	9.2
14	9.6	9.4	9.4	11.7	10.9	11.3	9.8	8.6	9.2	10.4	8.5	9.5
15	10.0	9.3	9.5	11.1	10.8	11.0	9.5	8.7	9.1	10.1	8.8	9.5
16	9.8	9.5	9.6	11.0	10.1	10.5	9.4	8.8	9.2	9.7	8.9	9.4
17	9.7	9.2	9.6	10.5	10.1	10.3	9.3	8.7	9.1	9.7	8.6	9.2
18	10.6	9.7	10.3	10.6	9.9	10.1	11.7	8.6	9.4	9.2	7.9	8.7
19	10.6	10.3	10.5	10.1	9.7	9.9	9.6	8.9	9.3	8.7	7.8	8.5
20	10.4	9.9	10.1	10.0	9.6	9.8	9.7	8.7	9.3	8.7	7.8	8.4
21	10.0	9.4	9.8	10.0	9.7	9.8	9.7	8.9	9.2	9.0	8.1	8.5
22	9.9	9.2	9.6	10.3	9.8	9.9	10.1	8.8	9.6	9.4	7.7	8.6
23	9.7	9.5	9.6	10.3	9.8	10.1	10.3	9.3	9.9	9.3	8.1	8.6
24	9.6	9.3	9.4	11.0	9.9	10.2	10.8	9.5	10.0	9.4	8.3	8.6
25	9.5	9.2	9.3	10.3	9.5	9.8	10.7	9.7	10.2	9.5	7.7	8.6
26	9.5	9.0	9.2	10.6	9.5	10.1	11.2	9.6	10.5	8.9	8.0	8.5
27	9.3	8.9	9.1	10.3	9.6	10.0	11.4	8.9	10.5	9.7	7.1	8.6
28	9.2	8.9	9.1	10.8	9.6	10.1	11.0	9.7	10.5	9.3	8.3	8.9
29	---	---	---	10.6	9.7	10.2	11.0	9.8	10.6	9.4	8.1	8.9
30	---	---	---	11.1	9.7	10.5	11.2	10.2	10.8	9.7	7.2	8.8
31	---	---	---	11.7	9.9	10.8	---	---	---	9.6	7.4	8.7
MONTH	10.6	8.9	9.8	11.8	8.9	10.3	12.5	8.3	9.9	11.4	7.1	9.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	8.8	6.8	8.1	6.8	4.8	5.7	8.2	6.6	7.3	7.4	6.1	6.8
2	9.0	7.3	8.4	6.3	5.1	5.7	7.8	6.2	7.2	7.3	5.9	6.9
3	8.5	7.0	8.1	6.7	5.1	5.9	8.1	6.3	7.4	7.8	6.2	7.2
4	9.1	7.8	8.4	7.1	5.9	6.5	7.8	6.6	7.4	7.9	6.3	7.4
5	9.1	7.2	8.4	7.4	5.7	6.6	8.3	6.9	7.6	7.7	6.4	7.1
6	8.9	7.2	8.0	6.7	5.3	6.2	7.7	6.6	7.4	7.6	6.6	7.2
7	8.6	6.8	7.7	7.1	5.2	6.3	7.9	5.9	7.1	7.5	6.2	7.1
8	8.6	6.7	7.7	7.1	5.2	6.3	7.5	6.3	7.1	7.7	6.3	7.4
9	8.2	6.8	7.6	7.1	5.6	6.6	7.8	6.1	7.2	8.0	6.4	7.6
10	8.2	7.1	7.8	6.8	5.7	6.5	7.7	6.2	7.1	8.7	6.4	7.8
11	8.0	7.4	7.6	6.9	5.9	6.5	7.8	5.6	7.1	8.3	6.6	7.8
12	9.2	7.1	7.7	6.9	6.3	6.6	8.0	6.3	7.3	8.0	6.2	7.6
13	8.6	6.6	7.7	6.8	5.1	6.3	8.1	6.9	7.6	8.4	6.2	7.7
14	8.7	7.2	8.1	7.0	5.4	6.3	7.9	5.9	7.2	8.7	6.5	7.9
15	8.5	6.8	7.7	7.3	5.6	6.5	8.3	5.7	7.1	8.2	6.7	7.8
16	7.9	6.4	7.6	7.4	4.9	6.6	7.6	5.6	7.2	8.0	6.3	7.3
17	7.8	6.2	7.1	7.6	5.4	6.7	7.6	5.2	6.9	8.3	6.8	7.6
18	7.9	6.2	7.0	7.5	5.7	6.7	7.7	6.1	7.1	8.7	6.3	7.4
19	7.8	6.0	7.0	7.4	5.8	6.5	7.7	6.4	7.2	7.4	6.9	7.2
20	7.1	6.1	6.7	7.0	5.1	6.2	7.8	6.0	7.1	7.3	6.1	6.9
21	7.7	5.5	6.5	7.0	4.5	6.3	7.7	6.3	7.1	7.4	5.5	6.9
22	6.9	5.6	6.4	7.6	5.3	6.8	7.7	6.5	7.2	7.7	5.9	6.9
23	6.7	5.9	6.3	7.9	5.0	7.0	7.7	6.0	7.0	7.6	5.3	6.6
24	6.9	4.5	5.8	7.7	5.7	6.9	7.6	6.2	7.2	7.7	5.6	6.8
25	7.5	4.9	6.2	7.6	5.6	6.9	7.7	5.7	7.2	7.7	5.9	6.9
26	7.0	4.9	6.1	7.7	5.8	6.9	7.8	6.4	7.2	7.4	5.1	6.7
27	6.8	4.5	5.7	7.1	4.9	6.7	7.7	5.8	7.1	7.2	5.1	6.3
28	6.7	4.6	5.4	7.5	5.3	7.0	7.5	5.9	7.0	7.0	5.5	6.4
29	5.5	4.1	5.0	7.7	5.6	7.1	7.8	6.3	7.3	7.7	5.1	6.6
30	5.9	4.5	5.3	8.1	6.5	7.5	7.9	6.7	7.3	7.3	5.6	6.9
31	---	---	---	8.1	6.5	7.5	7.8	6.1	7.2	---	---	---
MONTH	9.2	4.1	7.1	8.1	4.5	6.6	8.3	5.2	7.2	8.7	5.1	7.2



## CUMBERLAND RIVER BASIN

03421000 COLLINS RIVER NEAR MCMINNVILLE, TN

LOCATION.--Lat 35°42'32", long 85°43'46", Warren County, Hydrologic Unit 05130107, on left bank at downstream side of bridge on U. S. Highway 70S, 1.8 mi downstream from Barren Fork River, 2.5 mi northeast of McMinnville, and at mile 19.5.

DRAINAGE AREA.--640 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1924 to current year. Prior to April 1925 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 873: 1929, 1932(M), 1934-35, 1936(M), 1937. WSP 1276: 1925-26, 1928(M), 1933, 1936, 1940. WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 825.78 ft Sandy Hook datum. Prior to Oct. 16, 1926, nonrecording gage on upstream side of bridge at same datum.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data. U. S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--62 years, 1,154 ft<sup>3</sup>/s, 24.49 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,300 ft<sup>3</sup>/s, Mar. 23, 1929, gage height, 39.1 ft, from rating curve extended above 42,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 35 ft<sup>3</sup>/s, Sept. 21, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1854 is believed to have been about equal to that of Mar. 23, 1929, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 11,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 18	1630	*13,400	*16.10	No other peak greater than base discharge.			
Minimum discharge, 79 ft <sup>3</sup> /s Aug. 27.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	421	296	2370	380	310	971	602	309	565	688	112	110	
2	2720	291	2230	542	324	876	570	291	430	629	108	110	
3	1930	338	1890	544	507	820	538	271	507	541	106	122	
4	1310	385	1540	518	507	773	508	259	540	398	104	2470	
5	937	626	1300	485	911	724	478	251	421	313	102	7050	
6	685	876	1150	448	1640	687	460	244	320	254	99	2630	
7	526	756	1000	414	1810	647	455	239	255	218	101	1340	
8	428	641	869	385	1580	602	612	236	262	193	106	875	
9	361	561	783	354	1280	563	716	230	316	188	108	673	
10	308	487	712	327	1070	534	664	224	529	183	106	536	
11	268	441	659	320	968	523	594	216	393	165	134	437	
12	241	401	645	312	921	520	537	215	311	157	130	404	
13	223	368	728	298	801	2720	498	215	253	148	130	421	
14	208	339	883	283	848	3180	465	210	217	343	136	625	
15	201	316	869	271	2550	3030	442	202	190	410	119	515	
16	194	321	797	256	2480	2540	419	198	171	213	111	423	
17	204	459	744	247	3280	1940	401	194	156	177	111	356	
18	222	580	683	240	11200	1580	385	196	143	155	111	347	
19	209	552	617	253	7670	2110	370	205	135	142	107	348	
20	195	501	567	278	4150	2290	373	202	129	136	100	318	
21	198	459	527	313	2770	1860	420	195	124	133	100	318	
22	215	438	488	294	2110	1530	439	194	118	124	96	376	
23	353	467	464	271	1720	1320	444	193	117	119	91	403	
24	391	505	458	256	1510	1170	411	190	114	115	90	492	
25	429	478	443	253	1430	1040	378	193	111	114	88	486	
26	442	446	393	266	1290	939	359	239	108	149	84	402	
27	408	684	353	307	1200	860	346	777	105	130	83	337	
28	377	3260	340	319	1100	795	334	1220	104	122	176	310	
29	348	5460	328	309	---	738	323	2420	2620	137	179	278	
30	335	3590	312	315	---	686	316	1350	1910	128	117	244	
31	309	---	313	318	---	641	---	818	---	117	105	---	
TOTAL	15596	25322	25455	10376	57937	39209	13857	12396	11674	7039	3450	23756	
MEAN	503	844	821	335	2069	1265	462	400	389	227	111	792	
MAX	2720	5460	2370	544	11200	3180	716	2420	2620	688	179	7050	
MIN	194	291	312	240	310	520	316	190	104	114	83	110	
CFSM	.79	1.32	1.28	.52	3.23	1.98	.72	.62	.61	.35	.17	1.24	
IN.	.91	1.47	1.48	.60	3.37	2.28	.81	.72	.68	.41	.20	1.38	
CAL YR 1985	TOTAL	288297		MEAN	790	MAX	6570	MIN	115	CFSM	1.23	IN.	16.76
WTR YR 1986	TOTAL	246067		MEAN	674	MAX	11200	MIN	83	CFSM	1.05	IN.	14.30



## 03422500 CANEY FORK NEAR ROCK ISLAND, TN

LOCATION.--Lat 35°48'26", long 85°37'44", White County, Hydrologic Unit 05130108, on right bank 180 ft downstream from powerhouse of Tennessee Valley Authority, 0.8 mi downstream from Great Falls Dam, 0.9 mi downstream from Collins River, 1.5 mi northwest of Rock Island, and at mile 90.3.

DRAINAGE AREA.--1,678 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1911 to April 1913, July 1913 to May 1914, August 1914 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 1276: 1934, 1937. WSP 1910: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 647.09 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 30, 1924, at sites from 80 ft to 0.5 mi upstream at different datums. Apr. 12, 1925, to Sept. 9, 1930, at present site at datum 5.00 ft higher and Sept. 10, 1930, to Sept. 18, 1964, 3.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, Oct. 1-4, Aug. 13 to Sept. 30, which are fair. Flow regulated since Dec. 8, 1916, by Great Falls Lake (station 03422000). Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--72 years (1915-86), 3,145 ft<sup>3</sup>/s, 25.45 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft<sup>3</sup>/s, Mar. 23, 1929, gage height, 43.6 ft, present datum, from floodmark, from rating curve extended above 110,000 ft<sup>3</sup>/s; minimum daily, 25 ft<sup>3</sup>/s, several days August to October 1951.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1902 reached a stage about 10 ft lower than the flood of Mar. 23, 1929, at a point 8 mi downstream, from profile by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 46,600 ft<sup>3</sup>/s, Feb. 18, gage-height, 22.69 ft; minimum, 37 ft<sup>3</sup>/s Jan. 13, 14, 15, 16; minimum daily, 37 ft<sup>3</sup>/s Jan. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	2000	740	5950	740	56	3350	1940	1120	3290	1130	193	86		
2	3700	482	4970	799	57	3320	2180	708	3270	1160	83	229		
3	5000	537	4380	1490	59	3310	2180	67	3240	1300	83	355		
4	3500	1050	3780	1890	62	3280	2110	66	2330	81	83	1050		
5	3350	696	3420	1940	1990	3270	143	525	2370	82	83	9200		
6	3270	1730	3340	1020	3330	3240	86	716	2350	83	85	2620		
7	3140	2240	3320	916	6090	3200	944	695	85	999	85	2460		
8	3090	2210	3330	1060	5460	2350	1010	596	71	421	86	1850		
9	2660	1290	3290	424	5080	2330	888	592	1020	510	87	1460		
10	2300	58	3270	50	3820	1940	1510	67	1010	498	87	1460		
11	2290	1110	3230	52	3300	1700	1010	67	1410	337	86	1450		
12	72	1080	3200	52	3300	1760	65	495	1560	83	86	1440		
13	70	1100	2990	51	3280	2310	65	334	1510	83	85	1420		
14	1050	890	3060	37	3250	3170	1380	377	72	248	85	1410		
15	1060	921	3060	753	3240	3200	1230	387	84	496	84	329		
16	882	696	2590	754	3250	3300	1410	378	972	339	84	44		
17	781	56	2030	1010	7000	3030	1370	68	465	343	86	455		
18	734	676	1410	651	35800	5250	1680	68	300	344	85	421		
19	724	1300	1500	685	18100	4330	66	327	242	83	84	412		
20	59	1810	1430	875	8910	3310	68	334	395	85	88	43		
21	825	1890	478	1010	6490	3330	1010	381	73	454	85	43		
22	368	1890	56	1330	5150	3340	993	339	74	241	86	475		
23	1010	937	311	1500	4300	3330	1060	336	569	240	88	363		
24	998	823	57	1150	3580	3300	1350	64	290	192	88	355		
25	247	2030	2210	56	3530	3280	1370	64	298	191	85	360		
26	59	2080	2220	56	3410	3250	67	73	302	85	84	512		
27	59	2110	1100	1280	3370	3250	68	1550	73	86	86	406		
28	1270	2880	772	1700	3360	3200	795	3210	74	192	700	412		
29	1210	16500	729	966	---	1630	777	3270	77	195	355	300		
30	1230	9070	804	454	---	1570	891	3260	1860	192	86	505		
31	641	---	55	56	---	2140	---	3290	---	198	86	---		
TOTAL	47649	60882	72342	24807	148624	92570	29716	23824	29736	10971	3637	31925		
MEAN	1537	2029	2334	800	5308	2986	991	769	991	354	117	1064		
MAX	5000	16500	5950	1940	35800	5250	2180	3290	3290	1300	700	9200		
MIN	59	56	55	37	56	1570	65	64	71	81	83	43		
(+)	-6200	+13500	-14900	+1000	+11600	-8800	-1700	+9200	-4100	+1400	+700	-900		
MEAN†	1337	2479	1853	832	5722	2702	934	1065	855	399	140	1034		
CFSM†	.80	1.48	1.10	.50	3.41	1.61	.56	.63	.51	.24	.08	.62		
IN.†	.92	1.65	1.27	.57	3.55	1.86	.62	.73	.57	.27	.10	.69		
CAL YR 1985	TOTAL	749121	MEAN	2052	MAX	18700	MIN	43	MEAN†	2014	CFSM†	1.20	IN.†	16.29
WTR YR 1986	TOTAL	576683	MEAN	1580	MAX	35800	MIN	37	MEAN†	1582	CFSM†	.94	IN.†	12.80

† Change in contents, in cfs-days, in Great Falls Lake.

‡ Adjusted for change in contents.

NOTE.--Contents (cfs-days) for adjustment furnished by Tennessee Valley Authority.

## CUMBERLAND RIVER BASIN

03425000 CUMBERLAND RIVER AT CARTHAGE, TN  
(National stream-quality accounting network station)

LOCATION.--Lat 36°14'53", long 85°57'19", Smith County, Hydrologic Unit 05130201, on left bank of Cordell Hull Bridge on State Highway 25, at Carthage, 1.0 mi downstream from Caney Fork River, and at mile 308.2.

DRAINAGE AREA.--10,690 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1922 to current year. Gage-height records collected in this vicinity since 1885 are in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 893: 1923-39. WSP 1276: 1927, 1929(M), 1937(M). WSP 1306: 1943 (monthly runoff). WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 437.53 ft above National Geodetic Vertical Datum of 1929. Prior to May 12, 1936 nonrecording gage at site 1,000 ft downstream at same datum. May 12 to July 17, 1936, non-recording gage at present site and datum. Since Oct. 1, 1957, auxiliary water-stage recorder 15.8 mi downstream from base gage at same datum.

REMARKS.--Records good except for estimated daily discharges, Aug. 18-20, which are fair. Flow regulated by five upstream lakes or reservoirs, (see p. 88). U.S. Army Corps of Engineers Satellite telemeter at station.

AVERAGE DISCHARGE.--64 years, 17,410 ft<sup>3</sup>/s, 22.11 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft<sup>3</sup>/s, Dec. 30, 1926; maximum gage height, 59.8 ft, Dec. 30, 1926; minimum daily discharge, 366 ft<sup>3</sup>/s, Oct. 29, 1940; minimum gage height since filling of Old Hickory Lake on Dec. 30, 1956, 4.3 ft, Oct. 28, 1969.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1793, that of Dec. 30, 1926.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 52,200 ft<sup>3</sup>/s, Mar. 13; maximum gage height, 22.58 ft, Mar. 13; minimum daily discharge, 2,160 ft<sup>3</sup>/s, Nov. 4; minimum gage height, 4.88 ft, Oct. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4800	5870	12000	15200	5430	12200	6060	10300	3840	8600	10300	3760
2	4270	6330	12900	17500	5110	9460	7430	9650	5580	10600	8890	5230
3	4860	3870	15400	18000	6400	8630	7870	8930	7180	11100	5980	5650
4	5800	2160	13800	12600	8830	9760	7250	5880	12500	7520	5530	17300
5	5000	7720	16200	10900	12900	11100	8070	4040	10100	7230	7800	12600
6	3970	6860	19800	9520	13500	9820	5170	4390	8330	4430	8970	6550
7	5090	8970	18700	9370	11600	10100	4760	5870	5560	5560	10400	4390
8	5060	7590	14400	14000	11400	10900	6630	6960	8340	7350	10000	4640
9	6600	6440	15700	17900	8350	5320	9210	6310	9020	8790	8140	5720
10	6300	4760	18000	14900	6540	6040	10400	6390	16000	11300	6270	8690
11	6450	4220	20600	9980	7190	10800	10000	5310	12000	9720	5720	11000
12	4820	4050	22600	6220	8980	12100	8360	4670	11900	8150	7960	10200
13	3230	5420	24100	5960	13000	42700	5990	5420	9220	5180	10700	9480
14	4350	5750	24600	7620	8480	33600	3080	6190	7210	5680	9950	6920
15	5850	4920	25300	8530	11700	17400	7340	6940	5830	8370	10500	4980
16	6580	4760	25100	7860	8440	14500	8290	7520	4950	9580	8520	5360
17	8060	4330	23000	6790	21100	8680	9370	6020	5260	9920	6080	8690
18	7230	7040	25300	4100	46300	7600	9530	4620	5000	10600	5700	7100
19	6200	8800	27400	3290	23200	7700	6100	5570	6270	7870	7000	8400
20	4010	9180	23600	6810	11500	9550	4290	5980	6390	4740	9500	7040
21	4190	11100	24700	4890	6830	11700	3610	6640	6710	5120	10300	5240
22	5210	10400	21900	6890	5800	11300	5980	7510	5770	8420	10600	4840
23	6500	9290	16900	8250	6690	7210	8560	9840	5440	8880	9150	6290
24	6810	7580	17000	8340	10500	8250	10600	13400	6820	9660	5650	7390
25	6900	7090	22600	5950	13800	7880	9050	7770	8780	8860	4450	8960
26	7460	7790	26600	5550	15600	7190	7480	5360	9220	7870	6660	8760
27	4800	8720	21400	5540	12600	7380	5480	8110	9370	5300	8710	7480
28	4300	27700	17700	10800	12000	7740	3860	8090	7800	5420	11100	5620
29	3880	19500	14700	12800	---	6570	6170	13300	5890	7410	10100	6280
30	5050	11800	11400	13500	---	4850	5140	8860	5620	9340	9690	8170
31	5160	---	11800	9790	---	5200	---	6300	---	11400	6510	---
TOTAL	168790	240010	605200	299350	333770	343230	211130	222140	234310	249970	256830	222730
MEAN	5445	8000	19520	9656	11920	11070	7038	7166	7810	8064	8285	7424
MAX	8060	27700	27400	18000	46300	42700	10600	13400	16000	11400	11100	17300
MIN	3230	2160	11400	3290	5110	4850	3080	4040	3840	4430	4450	3760

CAL YR 1985 TOTAL 4231130 MEAN 11590 MAX 35000 MIN 2160 MEAN± 10980 CFSM± 1.03 IN.± 13.94  
WTR YR 1986 TOTAL 3387460 MEAN 9281 MAX 46300 MIN 2160 MEAN± 9116 CFSM± .85 IN.± 11.58

† Adjusted for changes in contents in Lake Cumberland, Dale Hollow Lake, Cordell Hull Reservoir, Great Falls, and Center Hill Lakes.

NOTE.--Contents (cfs-days) for adjustments furnished by U.S. Army Corps of Engineers.

## CUMBERLAND RIVER BASIN

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03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to September 1981.

WATER TEMPERATURE: October 1975 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 338 microsiemens, Sept. 5, 1981; minimum, 89 microsiemens, July 2, 1980.

WATER TEMPERATURES: Maximum, 29.5°C, Oct. 10, 1977; minimum, 2.0°C, Jan 20, 22, 23, 1981.

REVISIONS.--Records for 1985 have been revised. These figures supersede those published in the report for 1985.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 23...	1015	8620	159	7.30	17.5	759	4.7	7.1	74	160
DEC 20...	0900	25800	176	7.60	12.0	758	10	9.3	87	K27
FEB 26...	1100	12300	198	7.40	7.5	762	2.0	11.9	99	K25
APR 16...	1015	9970	190	7.90	12.0	758	9.0	11.2	104	120
JUN 19...	0845	8550	182	7.60	16.5	759	2.5	7.8	81	K22
AUG 06...	0915	3130	174	7.80	13.0	760	3.0	7.8	74	230

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CACO3)
OCT 23...	660	66	20	19	4.5	3.3	10	0.2	1.2	46
DEC 20...	300	75	25	21	5.4	4.0	10	0.2	1.5	50
FEB 26...	K5	91	14	27	5.8	4.2	9	0.2	1.3	77
APR 16...	420	89	23	26	5.9	3.9	9	0.2	1.4	66
JUN 19...	K42	80	14	23	5.5	3.9	9	0.2	1.2	66
AUG 06...	60	77	7	24	4.1	2.4	6	0.1	1.2	70

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT 23...	4.5	24	3.0	<0.1	3.4	83	86	0.11	1930
DEC 20...	2.4	29	3.6	<0.1	3.4	103	98	0.14	7170
FEB 26...	5.9	26	4.5	<0.1	3.7	121	120	0.16	4020
APR 16...	1.6	29	4.2	0.2	3.3	110	110	0.15	2960
JUN 19...	3.2	29	4.2	<0.1	3.3	138	110	0.19	3190
AUG 06...	2.1	18	4.1	<0.1	3.4	107	99	0.15	904

K--Results based on non-ideal colony count.



## CUMBERLAND RIVER BASIN

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 23...	0.35	0.08	0.6	0.12	0.02	0.03	17	396	73
DEC 20...	0.63	0.02	0.3	<0.01	<0.01	<0.01	20	1390	61
FEB 26...	0.43	0.03	0.5	0.16	0.03	0.03	7	232	93
APR 16...	0.35	0.11	0.4	<0.01	<0.01	0.01	12	323	55
JUN 19...	0.32	<0.01	0.6	0.02	0.03	<0.01	19	439	88
AUG 06...	0.58	<0.01	0.5	<0.01	<0.01	0.01	9	76	63

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 23...	20	<1	23	<0.5	2	<1	<3	2	6	<1
FEB 26...	<10	<1	19	<0.5	1	<1	<3	1	5	1
APR 16...	10	<1	22	<0.5	1	2	<3	2	8	1
JUN 19...	10	1	24	0.9	<1	1	<3	<1	5	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 23...	6	10	<0.1	<10	<1	<1	<1	75	<6	9
FEB 26...	<4	4	0.1	<10	3	<1	1	100	<6	<3
APR 16...	7	7	0.2	<10	1	<1	<1	95	<6	4
JUN 19...	10	3	<0.1	<10	<1	<1	<1	96	<6	9

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 18...	1115	8370	179	7.50	16.5	763	2.0	7.9	81	K38
DEC 18...	1030	23700	202	7.60	8.5	772	31	9.2	78	82
FEB 19...	0945	21700	232	7.90	6.5	759	6.6	11.0	90	250
APR 08...	0945	7570	210	7.90	13.0	762	4.9	10.4	99	180
JUN 09...	1030	8890	241	7.56	19.0	764	3.5	8.1	87	100
AUG 27...	0930	7520	195	7.50	18.5	751	6.1	7.9	86	K9

K--Results based on non-ideal colony count.



## CUMBERLAND RIVER BASIN

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03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3
OCT 18...	K15	80	27	22	6.0	4.4	11	0.2	1.3	53
DEC 18...	64	87	29	24	6.5	5.0	11	0.2	1.6	--
FEB 19...	580	110	35	31	6.8	5.8	10	0.3	1.8	75
APR 08...	K13	93	17	27	6.3	4.8	10	0.2	1.5	76
JUN 09...	40	110	27	33	6.5	5.0	9	0.2	1.5	83
AUG 27...	K32	79	25	22	5.9	5.1	12	0.3	1.5	54

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
OCT 18...	3.2	32	4.2	<0.1	3.5	124	110	0.17	2800	<0.01
DEC 18...	2.8	27	4.5	<0.1	4.0	106	110	0.14	6780	<0.01
FEB 19...	1.8	27	5.0	0.1	3.6	131	130	0.18	7680	<0.01
APR 08...	1.9	23	5.2	<0.1	2.5	121	120	0.16	2470	<0.01
JUN 09...	4.4	31	5.0	<0.1	3.9	152	140	0.21	3650	<0.01
AUG 27...	3.4	32	4.8	<0.1	3.5	118	110	0.16	2400	<0.01

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 18...	0.59	0.29	<0.01	0.4	0.02	0.01	<0.01	4	90	96
DEC 18...	0.35	0.05	0.02	0.3	0.03	0.02	0.01	9	576	94
FEB 19...	0.51	0.05	0.04	0.3	0.06	0.03	0.02	19	1110	75
APR 08...	0.20	--	0.04	0.3	0.03	0.02	0.01	11	225	81
JUN 09...	2.20	0.07	0.06	0.5	0.07	0.03	0.03	11	264	87
AUG 27...	0.36	0.04	0.01	0.3	0.03	0.02	0.01	23	467	69

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 18...	20	<1	27	2	<1	1	<3	2	9	<5
FEB 19...	20	<1	28	<0.5	3	<1	<3	1	14	<5
JUN 09...	<10	<1	31	<0.5	<1	<1	<3	1	6	<5

K--Results based on non-ideal colony count.

## CUMBERLAND RIVER BASIN

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 18...	<4	6	0.1	<10	1	<1	<1	96	<6	4
FEB 19...	4	17	0.1	<10	1	<1	<1	110	<6	11
JUN 09...	6	7	<0.1	<10	3	<1	<1	110	<6	13

## CUMBERLAND RIVER BASIN

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03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN

## WATER-QUALITY RECORDS

LOCATION.--Lat 36°17'47", long 86°39'28", Davidson County, Hydrologic Unit 05130202, at end of lock wall near left downstream bank, at Old Hickory Dam, 2.0 mi west of Hendersonville, and at mile 216.2.

DRAINAGE AREA.--11,673 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1979 to current year.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1979 to current year.

pH: April 1979 to current year.

WATER TEMPERATURE: April 1979 to current year.

DISSOLVED OXYGEN: April 1979 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1979.

REMARKS.--Flow regulated by Old Hickory Dam and other reservoirs above station. Continuous discharge records are published under station 03426500 Cumberland River below Old Hickory, TN. Periods of missing record were due to monitor malfunction. Supersaturation of dissolved oxygen may occur due to local hydraulic conditions.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 254 microsiemens, Dec. 14, 1983; minimum, 146 microsiemens, May 6, 1979.

pH: Maximum, 9.0 units, Jan. 11-13, 15, 16, 1986; minimum, 6.8 units, Sept. 15, 1980, Sept. 26, Oct. 5, 16, 18, 20, 23, 1984.

WATER TEMPERATURE: Maximum, 27.5°C, July 5, 6, Sept. 7, 1980, Aug. 13, 1981, July 24, 1985, July 31, 1986; minimum, 2.5°C, Jan. 12-14, 1981, Jan. 21, 22, 1984, Feb. 2-4, 1985.

DISSOLVED OXYGEN: Maximum, 15.2 mg/L, April 6, 1983; minimum, 3.0 mg/L, Sept. 15, 1980, July 26, 1985, June 23, 24, 1986.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 252 microsiemens, Feb. 20, 21; minimum, 187 microsiemens, Oct. 1, 6, 8, 9.

pH: Maximum, 9.0 units, Jan. 11-13, 15, 16; minimum, 7.2 units, Nov. 27, May 29, July 22, 27, Aug. 17.

WATER TEMPERATURE: Maximum, 27.5°C, July 31; minimum, 4.0°C, Dec. 28, Jan. 9, 10, Jan. 28 to Feb. 1.

DISSOLVED OXYGEN: Maximum, 15.0 mg/L, Sept. 4; minimum, 3.0 mg/L, June 23, 24.

## SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	189	187	188	200	198	199	227	225	226	204	202	203
2	190	189	190	200	198	199	226	223	225	204	202	203
3	190	189	189	199	197	198	222	219	220	202	201	202
4	189	188	189	200	198	199	220	216	218	204	202	203
5	189	188	189	201	200	200	225	218	222	204	203	204
6	189	187	188	202	201	201	229	222	226	205	204	204
7	189	188	188	203	202	203	232	227	230	205	204	205
8	189	187	188	203	202	203	234	232	233	206	205	205
9	188	187	188	204	203	203	232	228	230	205	202	204
10	190	188	189	205	204	205	229	225	227	208	202	205
11	190	189	189	207	205	206	225	222	224	206	203	204
12	190	189	190	208	207	208	222	219	221	205	203	204
13	191	189	190	209	208	209	217	214	216	205	203	204
14	193	191	192	211	209	210	216	213	215	204	202	203
15	193	192	193	212	210	211	216	208	212	205	203	204
16	193	192	192	213	210	211	207	202	204	205	204	204
17	193	191	192	214	212	213	204	200	203	205	203	204
18	194	191	193	214	212	213	206	204	205	207	204	205
19	195	193	194	215	212	214	206	205	205	207	206	207
20	196	195	196	218	214	217	206	203	204	208	206	207
21	199	197	198	220	217	219	203	202	203	211	207	208
22	198	197	198	220	219	220	203	201	202	210	207	209
23	197	194	196	220	219	220	204	202	203	210	205	209
24	196	194	194	222	220	221	204	203	204	212	208	210
25	195	194	194	221	220	221	204	203	203	211	207	209
26	196	194	195	221	219	220	204	202	203	211	208	210
27	197	195	196	220	218	219	204	202	203	211	209	210
28	196	195	195	223	218	219	203	201	202	212	206	210
29	198	196	197	226	223	225	202	200	201	211	208	209
30	198	197	198	226	224	225	203	201	202	211	210	210
31	199	198	198	---	---	---	203	202	203	211	209	210
MONTH	199	187	192	226	197	211	234	200	213	212	201	206

## CUMBERLAND RIVER BASIN

03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	209	207	208	249	246	248	229	227	228	224	222	223
2	208	206	207	248	247	248	231	221	225	225	223	224
3	210	207	208	251	247	249	225	216	221	226	224	225
4	210	208	209	251	249	250	218	212	215	229	226	227
5	210	208	209	250	247	248	216	210	213	230	226	229
6	210	208	209	248	242	245	217	213	215	242	229	230
7	213	210	212	240	226	234	218	213	215	231	229	231
8	212	211	212	230	226	227	218	210	214	231	229	230
9	214	212	213	226	220	224	214	210	212	232	226	228
10	216	214	215	221	214	217	215	211	213	244	212	228
11	217	215	216	214	212	213	214	209	211	227	225	226
12	219	217	218	214	208	211	213	209	211	230	225	228
13	222	219	220	209	201	205	215	209	211	235	225	228
14	227	220	223	205	200	201	213	209	210	227	224	225
15	232	222	229	209	205	207	216	209	212	228	223	225
16	235	231	234	208	206	207	215	210	212	226	223	225
17	239	235	236	207	205	206	214	211	211	226	223	225
18	243	239	241	210	206	208	214	211	212	224	222	223
19	245	239	241	215	209	213	215	211	212	223	221	222
20	252	243	247	222	215	218	215	211	213	224	222	223
21	252	241	249	225	219	221	217	213	215	224	221	223
22	251	244	249	225	222	223	216	213	215	223	221	222
23	249	247	248	228	223	226	215	212	213	224	222	223
24	248	244	246	232	227	229	214	211	212	224	220	222
25	245	242	243	233	230	232	216	213	214	222	220	221
26	242	241	241	---	---	---	217	215	216	221	219	220
27	244	241	243	---	---	---	218	216	217	222	220	221
28	247	243	245	---	---	---	222	219	220	221	219	220
29	---	---	---	---	---	---	222	221	222	227	218	223
30	---	---	---	---	---	---	224	222	223	223	222	223
31	---	---	---	---	---	---	---	---	---	223	220	222
MONTH	252	206	228	---	---	---	231	209	215	244	212	225

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	222	220	221	222	218	220	216	205	207	212	209	210
2	220	218	219	221	217	219	208	205	207	210	207	208
3	221	217	219	220	217	219	206	203	204	211	207	209
4	220	218	219	219	217	218	205	202	203	208	201	205
5	218	216	217	219	218	219	205	203	204	203	201	202
6	217	214	216	221	219	220	205	203	204	201	199	200
7	215	213	215	223	220	222	206	204	205	201	196	198
8	215	212	214	223	219	221	207	205	206	204	196	198
9	216	213	214	225	201	218	211	207	208	203	197	199
10	214	208	212	222	219	220	211	206	208	200	195	196
11	210	208	209	220	214	217	213	207	209	199	195	196
12	209	207	208	220	217	218	210	208	209	198	191	193
13	211	208	209	219	216	217	213	211	212	194	192	193
14	215	209	213	221	217	219	218	211	213	194	191	192
15	217	212	215	220	217	218	214	211	213	194	191	192
16	218	215	217	219	216	217	213	211	212	193	190	190
17	220	217	218	223	217	220	218	210	213	196	192	194
18	219	213	216	221	218	219	215	210	212	196	195	196
19	217	214	215	217	212	214	216	212	215	197	196	197
20	220	218	219	211	209	210	217	213	215	197	196	197
21	224	222	222	211	208	209	218	215	217	198	197	197
22	228	225	227	209	206	207	216	214	214	198	197	197
23	230	228	229	205	204	204	215	213	214	199	198	199
24	232	230	231	204	202	203	214	211	213	199	197	198
25	233	228	231	204	199	202	214	212	213	198	197	197
26	233	230	232	204	197	199	214	211	213	201	199	200
27	234	228	231	201	195	196	214	210	211	203	201	202
28	228	224	226	197	194	196	214	210	212	205	203	203
29	225	222	224	206	197	200	215	213	214	206	204	205
30	222	217	220	209	200	202	213	211	212	208	204	206
31	---	---	---	204	201	203	212	211	212	---	---	---
MONTH	234	207	219	225	194	212	218	202	210	212	190	199



03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MAR	
1	8.1	7.7	7.7	7.6	7.6	7.5	8.4	8.3	8.4	8.2	8.3	8.3
2	8.3	7.7	7.7	7.6	7.6	7.6	8.4	8.3	8.4	7.9	8.3	8.3
3	7.9	7.7	7.6	7.5	7.6	7.6	8.4	8.4	8.4	8.1	8.3	8.3
4	8.3	7.8	7.7	7.5	7.6	7.6	8.5	8.4	8.4	8.3	8.3	8.3
5	7.8	7.6	7.7	7.5	7.7	7.6	8.5	8.4	8.5	8.4	8.3	8.3
6	8.2	7.6	8.0	7.6	7.7	7.6	8.6	8.4	8.5	8.3	8.3	8.3
7	8.2	7.7	7.8	7.7	7.7	7.7	8.6	8.5	8.4	8.3	8.3	8.3
8	8.4	7.8	7.9	7.7	7.8	7.7	8.8	8.5	8.4	8.2	8.3	8.3
9	8.2	7.9	7.9	7.7	7.8	7.7	8.9	8.7	8.4	8.2	8.3	8.3
10	8.1	7.5	8.1	7.7	7.8	7.8	8.9	8.7	8.3	8.2	8.3	8.3
11	8.1	7.8	7.9	7.7	7.8	7.8	9.0	8.8	8.3	8.1	8.3	8.3
12	8.3	7.7	8.0	7.7	7.8	7.7	9.0	8.9	8.5	8.2	8.4	8.3
13	7.9	7.6	7.8	7.7	7.8	7.8	9.0	8.9	8.4	8.3	8.4	8.1
14	7.9	7.6	7.9	7.6	7.9	7.8	8.9	8.6	8.4	8.1	8.2	8.2
15	7.8	7.5	7.9	7.5	7.9	7.9	9.0	8.5	8.5	8.2	8.3	8.2
16	7.8	7.4	8.0	7.5	7.9	7.9	9.0	8.5	8.5	8.3	8.3	8.3
17	8.7	7.5	7.6	7.4	8.1	7.9	8.9	8.5	8.5	8.2	8.3	8.3
18	8.5	7.7	7.7	7.3	8.2	8.0	8.9	8.7	8.4	8.0	8.4	8.4
19	8.2	7.7	7.7	7.4	8.2	8.1	8.8	8.6	8.3	8.1	8.4	8.4
20	7.8	7.6	7.6	7.5	8.2	8.1	8.8	8.6	8.3	8.2	8.5	8.4
21	7.7	7.5	7.7	7.4	8.2	8.2	8.8	8.6	8.3	8.2	8.5	8.5
22	7.7	7.5	7.7	7.5	8.2	8.1	8.8	8.5	8.3	8.3	8.6	8.6
23	7.8	7.5	7.6	7.5	8.2	8.2	8.8	8.5	8.3	8.3	8.6	8.6
24	7.8	7.6	7.5	7.4	8.2	8.2	8.8	8.5	8.3	8.3	8.7	8.6
25	7.9	7.5	7.9	7.3	8.3	8.2	8.7	8.6	8.3	8.3	8.7	8.7
26	8.0	7.5	7.7	7.3	8.3	8.2	8.6	8.4	8.3	8.3	---	---
27	8.1	7.6	7.8	7.2	8.3	8.3	8.6	8.4	8.4	8.3	---	---
28	7.7	7.5	8.0	7.5	8.3	8.3	8.7	8.5	8.4	8.3	---	---
29	8.1	7.5	7.7	7.6	8.3	8.3	8.8	8.5	---	---	---	---
30	7.8	7.7	7.8	7.6	8.4	8.3	8.7	8.4	---	---	---	---
31	7.9	7.5	---	---	8.4	8.3	8.5	8.3	---	---	---	---
MONTH	8.7	7.4	8.1	7.2	8.4	7.5	9.0	8.3	8.5	7.9	---	---
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.6	8.4	8.1	8.1	7.5	7.5	7.8	7.5	7.7	7.5	7.6	7.4
2	8.5	8.4	8.1	8.1	7.5	7.5	---	---	7.5	7.4	7.7	7.4
3	8.5	8.4	8.0	8.0	7.5	7.5	---	---	7.5	7.3	7.7	7.4
4	8.5	8.4	8.0	7.9	7.6	7.5	---	---	7.8	7.4	8.1	7.4
5	8.5	8.5	7.9	7.9	7.6	7.5	---	---	7.7	7.5	7.6	7.5
6	8.5	8.4	7.8	7.8	7.6	7.6	---	---	7.6	7.4	7.6	7.5
7	8.5	8.4	7.8	7.7	7.6	7.6	---	---	7.5	7.4	7.5	7.3
8	8.5	8.4	7.6	7.6	7.6	7.6	---	---	7.7	7.6	8.0	7.3
9	8.5	8.4	7.6	7.5	7.6	7.6	---	---	7.8	7.5	7.7	7.4
10	8.5	8.4	7.6	7.6	7.7	7.6	---	---	7.8	7.5	8.2	7.3
11	8.5	8.4	7.5	7.5	7.6	7.6	---	---	7.7	7.5	8.0	7.6
12	8.5	8.4	7.5	7.4	7.6	7.6	---	---	7.7	7.4	7.7	7.5
13	8.5	8.4	7.6	7.5	7.6	7.6	---	---	8.0	7.5	8.0	7.5
14	8.5	8.4	7.5	7.5	7.6	7.6	---	---	7.9	7.5	8.2	7.6
15	8.5	8.4	7.5	7.4	7.6	7.6	---	---	7.7	7.4	7.9	7.6
16	8.5	8.4	7.5	7.5	7.6	7.6	---	---	7.4	7.3	7.6	7.5
17	8.5	8.4	7.4	7.4	7.6	7.6	7.6	7.3	7.5	7.2	7.8	7.5
18	8.5	8.5	7.5	7.4	7.6	7.5	7.5	7.3	7.5	7.3	---	---
19	8.5	8.5	7.4	7.4	---	---	7.4	7.3	7.4	7.3	---	---
20	8.5	8.4	7.4	7.4	---	---	7.4	7.3	7.6	7.3	---	---
21	8.5	8.4	7.4	7.3	---	---	7.4	7.3	7.8	7.4	---	---
22	8.5	8.4	7.4	7.3	---	---	7.4	7.2	7.7	7.4	---	---
23	8.5	8.4	7.4	7.3	---	---	7.5	7.3	7.4	7.4	---	---
24	8.5	8.5	7.5	7.4	---	---	7.6	7.4	7.5	7.3	---	---
25	8.5	8.4	7.4	7.4	---	---	7.5	7.3	7.6	7.4	---	---
26	8.4	8.4	7.4	7.3	---	---	7.5	7.3	7.7	7.3	---	---
27	8.3	8.3	7.3	7.3	---	---	7.4	7.2	7.5	7.3	---	---
28	8.3	8.2	7.3	7.3	---	---	7.5	7.3	7.7	7.3	---	---
29	8.2	8.2	7.5	7.2	---	---	7.4	7.3	8.1	7.6	---	---
30	8.2	8.1	7.5	7.5	7.8	7.6	7.6	7.3	7.9	7.5	---	---
31	---	---	7.5	7.5	---	---	8.0	7.4	7.7	7.5	---	---
MONTH	8.6	8.1	8.1	7.2	---	---	---	---	8.1	7.2	---	---

## CUMBERLAND RIVER BASIN

03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	21.0	20.0	20.5	18.5	18.0	18.5	14.5	13.5	14.0	5.0	4.5	5.0
2	20.0	19.5	20.0	18.0	17.5	18.0	13.5	12.5	13.0	5.5	4.5	5.0
3	19.5	19.0	19.5	17.5	16.5	17.0	12.5	12.0	12.0	6.0	5.5	5.5
4	20.0	19.0	19.5	17.0	16.0	16.5	12.0	11.0	11.5	6.0	5.5	6.0
5	19.5	18.5	19.0	16.0	15.5	15.5	11.5	11.0	11.5	6.0	5.5	5.5
6	19.0	18.5	18.0	15.5	15.0	15.5	11.0	10.0	10.5	5.5	5.0	5.5
7	19.0	18.0	18.5	15.5	15.0	15.5	10.5	10.0	10.5	5.5	5.0	5.5
8	19.0	18.5	19.0	15.0	14.5	15.0	10.5	9.5	10.0	5.0	4.5	5.0
9	19.5	18.5	19.0	14.5	14.5	14.5	10.5	10.0	10.5	4.5	4.0	4.5
10	19.5	18.0	19.0	15.0	14.5	14.5	10.5	10.0	10.5	4.5	4.0	4.5
11	19.5	18.5	19.0	15.0	14.5	14.5	10.5	10.5	10.5	5.0	4.5	4.5
12	20.0	18.0	19.0	15.0	14.5	15.0	10.5	10.5	10.5	5.0	4.5	5.0
13	19.5	18.5	19.0	15.0	15.0	15.0	10.5	9.5	10.0	5.0	5.0	5.0
14	20.0	19.0	19.5	15.5	15.0	15.5	9.5	8.5	9.0	5.0	4.5	5.0
15	20.0	18.5	19.5	15.5	15.0	15.5	9.0	8.0	8.5	5.0	4.5	5.0
16	19.5	18.5	19.5	16.0	15.0	15.5	8.5	8.0	8.0	5.0	4.5	5.0
17	21.0	18.5	20.0	15.0	14.5	15.0	8.5	8.0	8.5	5.5	5.0	5.0
18	21.0	19.0	20.0	16.0	15.0	15.5	8.5	7.5	8.0	6.0	5.5	5.5
19	20.5	20.0	20.5	16.0	15.5	16.0	7.5	7.0	7.5	5.5	5.5	5.5
20	20.5	20.0	20.0	16.0	14.5	15.5	7.5	6.0	7.0	5.5	5.5	5.5
21	20.5	20.0	20.0	15.0	14.0	14.5	7.0	6.5	6.5	6.0	5.5	6.0
22	20.0	19.0	19.5	14.5	14.0	14.5	7.0	6.5	6.5	6.5	6.0	6.0
23	20.5	19.0	19.5	14.5	14.0	14.0	7.0	6.5	7.0	6.0	6.0	6.0
24	20.0	19.5	20.0	14.0	13.5	14.0	7.0	6.0	7.0	6.5	6.0	6.0
25	19.5	19.5	19.5	14.5	13.5	14.0	6.5	5.5	6.0	6.5	6.0	6.0
26	20.0	19.0	19.5	14.5	14.5	14.5	5.5	4.5	5.0	6.5	6.0	6.0
27	19.5	19.5	19.5	15.0	14.5	14.5	5.0	5.0	5.0	6.0	4.5	5.0
28	19.5	19.0	19.0	15.0	14.5	14.5	5.5	4.0	5.0	4.5	4.0	4.5
29	19.0	19.0	19.0	14.5	14.5	14.5	5.5	5.0	5.0	4.5	4.0	4.0
30	19.0	18.5	18.5	14.5	14.0	14.5	5.0	4.5	5.0	4.5	4.0	4.5
31	18.5	18.5	18.5	---	---	---	5.5	5.0	5.0	4.5	4.0	4.5
MONTH	21.0	18.0	19.5	18.5	13.5	15.0	14.5	4.0	8.5	6.5	4.0	5.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	5.0	4.0	4.5	8.0	7.5	7.5	13.5	13.0	13.5	17.0	16.5	16.5
2	5.0	5.0	5.0	8.0	7.5	7.5	14.0	12.5	13.5	17.5	16.5	17.0
3	6.0	5.0	5.5	8.0	7.5	8.0	15.0	13.5	14.5	18.5	17.5	18.0
4	7.0	6.0	6.0	8.0	7.5	7.5	15.0	14.0	14.5	19.0	18.0	18.5
5	7.0	6.5	7.0	8.0	7.5	8.0	16.0	14.0	15.0	19.0	17.5	18.5
6	7.5	7.0	7.0	8.0	8.0	8.0	15.5	14.0	14.5	19.0	18.0	18.5
7	7.5	7.5	7.5	8.0	8.0	8.0	15.0	14.5	15.0	19.0	18.0	18.5
8	7.5	7.5	7.5	8.0	7.5	8.0	15.0	14.0	14.5	19.0	18.0	18.5
9	7.5	7.5	7.5	9.0	8.0	8.5	15.5	14.5	15.0	19.0	18.0	19.0
10	7.0	6.5	7.0	9.5	9.0	9.0	16.0	15.5	16.0	20.0	18.5	19.5
11	6.5	5.5	6.0	9.5	9.0	9.5	16.5	15.5	16.0	19.0	18.5	19.0
12	5.5	5.5	5.5	10.5	9.5	10.0	17.5	16.0	17.0	19.0	18.0	18.5
13	5.5	5.0	5.0	11.0	10.0	10.5	17.5	16.5	17.0	19.5	18.0	19.0
14	5.0	4.5	5.0	11.0	10.5	11.0	17.5	17.0	17.0	21.0	18.5	19.5
15	5.0	4.5	5.0	11.5	10.5	11.0	17.5	16.5	17.0	22.0	18.5	20.5
16	5.5	5.0	5.0	12.0	11.0	11.5	16.5	16.0	16.0	21.0	19.5	20.0
17	6.0	5.5	5.5	12.5	11.5	12.0	16.0	15.5	16.0	21.5	19.5	20.5
18	7.0	6.0	6.5	12.5	12.0	12.5	16.0	15.5	16.0	21.0	19.5	20.5
19	7.5	6.5	7.0	13.0	12.5	12.5	16.5	15.5	16.0	20.0	19.5	19.5
20	8.5	7.5	8.0	12.0	11.5	12.0	16.5	16.0	16.5	20.0	19.5	20.0
21	8.5	8.5	8.5	11.5	11.0	11.5	16.0	15.5	16.0	20.5	19.5	20.0
22	8.5	8.5	8.5	11.5	11.0	11.0	15.5	15.5	15.5	21.0	19.5	20.5
23	8.5	8.0	8.5	11.5	11.0	11.0	15.5	15.0	15.5	20.5	20.0	20.5
24	8.5	8.0	8.5	12.0	11.0	11.5	16.5	15.0	16.0	21.0	20.5	20.5
25	8.0	8.0	8.0	12.0	11.5	11.5	16.5	15.5	16.0	21.0	20.5	20.5
26	8.5	8.0	8.5	---	---	---	16.5	16.0	16.0	21.0	20.0	20.5
27	8.5	8.0	8.5	---	---	---	17.0	15.5	16.5	21.0	20.5	20.5
28	8.0	8.0	8.0	---	---	---	17.0	16.0	16.5	21.0	20.5	21.0
29	---	---	---	---	---	---	16.5	15.5	16.0	21.5	20.5	21.0
30	---	---	---	---	---	---	17.5	16.5	17.0	21.5	20.5	21.0
31	---	---	---	---	---	---	---	---	---	21.0	20.0	20.5
MONTH	8.5	4.0	7.0	---	---	---	17.5	12.5	15.5	22.0	16.5	19.5

## 03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN--Continued

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	20.5	20.5	20.5	25.0	24.0	24.5	26.5	25.5	26.0	23.5	23.5	23.5
2	21.0	20.5	20.5	24.5	23.5	24.0	26.0	25.0	25.5	23.5	23.0	23.5
3	22.5	20.0	21.5	26.0	24.0	25.0	25.0	24.0	24.5	23.5	23.0	23.5
4	22.5	21.5	22.0	26.0	25.0	25.5	25.5	24.0	24.5	24.0	23.0	23.5
5	22.5	21.5	22.0	26.5	25.0	25.5	25.0	24.0	24.5	23.0	22.5	23.0
6	22.5	21.5	22.0	25.5	25.0	25.0	25.0	24.0	24.5	23.0	22.5	22.5
7	22.5	22.0	22.0	25.5	25.0	25.5	25.0	24.5	24.5	22.5	22.0	22.5
8	23.0	22.0	22.5	26.0	25.0	25.5	24.5	24.0	24.5	23.0	22.0	22.5
9	23.5	22.0	23.0	25.5	24.5	25.0	25.0	24.0	24.5	22.5	22.0	22.5
10	23.5	22.5	23.0	25.5	24.5	25.0	25.0	23.5	24.5	23.5	22.0	22.5
11	24.0	22.5	23.0	26.5	25.0	26.0	24.5	23.5	24.0	23.0	22.5	23.0
12	22.5	22.0	22.0	26.0	25.5	25.5	24.5	23.5	24.0	22.5	22.0	22.0
13	23.0	21.5	22.5	26.0	25.5	26.0	25.5	24.0	24.5	23.0	22.0	22.5
14	23.5	22.5	23.0	26.0	25.5	26.0	25.5	24.5	25.0	23.0	22.0	22.5
15	23.0	22.5	23.0	26.5	26.0	26.0	25.5	24.0	25.0	23.0	22.5	23.0
16	22.5	22.0	22.5	26.5	26.0	26.5	24.5	24.0	24.0	23.0	22.5	22.5
17	22.5	22.0	22.0	27.0	26.0	26.5	24.5	23.5	24.0	23.5	22.5	23.0
18	23.5	22.0	23.0	27.0	26.0	26.5	24.0	23.5	23.5	23.0	22.5	23.0
19	23.5	23.0	23.0	26.0	25.0	25.5	24.0	23.5	24.0	22.5	22.5	22.5
20	23.0	22.5	23.0	25.5	24.5	25.0	24.5	23.5	24.0	22.5	22.0	22.5
21	23.5	22.5	23.0	25.5	24.5	25.0	25.0	23.5	24.5	22.5	22.0	22.0
22	23.0	22.5	22.5	25.5	24.0	25.0	25.0	24.0	24.5	22.0	22.0	22.0
23	22.5	21.5	22.0	26.0	24.5	25.0	24.0	23.5	23.5	22.5	22.0	22.0
24	23.0	22.0	22.5	26.0	25.0	25.5	24.0	23.0	23.5	22.0	22.0	22.0
25	24.0	22.0	23.0	25.5	25.0	25.5	24.0	23.5	24.0	23.0	22.5	23.0
26	24.0	22.5	23.5	25.5	24.5	25.0	24.5	23.0	24.0	23.0	22.0	22.5
27	24.5	23.0	23.5	25.0	24.0	24.5	24.0	23.0	23.5	23.0	22.0	22.5
28	24.0	23.5	23.5	25.5	24.0	24.5	25.0	23.0	23.5	22.5	22.0	22.0
29	24.0	23.5	24.0	25.0	24.5	25.0	25.0	24.5	25.0	23.0	22.0	22.5
30	24.5	24.0	24.5	26.0	24.5	25.5	24.5	24.0	24.5	23.5	22.0	22.5
31	---	---	---	27.5	25.0	26.0	24.5	23.5	24.0	---	---	---
MONTH	24.5	20.0	22.5	27.5	23.5	25.5	26.5	23.0	24.5	24.0	22.0	22.5

## OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	6.9	5.9	6.4	7.1	5.5	6.6	8.2	7.6	7.9	9.3	8.9	9.0
2	6.9	6.2	6.6	7.0	5.5	6.6	8.3	7.4	8.0	9.2	9.0	9.1
3	7.7	6.3	6.9	6.7	5.7	6.3	8.3	7.7	8.1	9.2	9.0	9.1
4	8.0	7.2	7.5	7.4	6.0	6.8	8.1	7.6	7.9	9.4	8.9	9.1
5	7.8	6.9	7.3	7.8	6.2	7.1	7.9	7.5	7.7	9.3	8.9	9.1
6	8.1	7.1	7.7	8.1	6.7	7.5	8.4	7.6	8.1	9.7	8.9	9.3
7	8.2	7.3	7.7	8.1	7.4	7.8	8.4	7.8	8.2	9.5	9.3	9.4
8	9.8	7.5	8.8	8.3	7.4	7.8	8.4	7.9	8.3	10.0	9.2	9.6
9	9.1	8.3	8.7	8.4	7.7	8.0	8.3	7.9	8.2	9.7	9.5	9.6
10	8.5	7.7	8.0	8.7	6.8	8.3	8.4	8.0	8.2	9.8	9.3	9.6
11	8.3	7.4	7.8	8.4	7.0	8.0	8.2	7.9	8.1	10.0	9.5	9.7
12	8.9	7.1	7.9	7.9	5.2	7.2	8.0	7.7	7.9	10.1	9.7	9.8
13	7.8	6.9	7.2	8.0	7.2	7.9	8.0	7.6	7.8	9.9	9.5	9.7
14	7.3	6.3	7.0	8.1	6.2	7.6	8.4	7.9	8.2	9.9	9.3	9.7
15	7.2	5.5	6.2	8.2	5.7	7.3	8.6	8.3	8.4	9.9	9.3	9.8
16	6.9	5.4	6.0	8.3	6.4	7.7	8.7	8.4	8.5	10.0	9.4	9.8
17	9.3	5.8	7.0	7.6	6.4	7.1	8.6	8.0	8.3	9.8	9.1	9.6
18	8.5	6.3	7.4	8.0	6.5	7.3	8.4	8.1	8.3	9.7	8.8	9.4
19	7.9	6.6	7.2	8.1	6.7	7.6	8.5	8.2	8.4	9.7	8.7	9.3
20	6.9	5.9	6.3	8.0	6.6	7.2	8.6	8.4	8.5	9.6	8.6	9.3
21	6.5	5.7	6.0	8.1	6.6	7.4	8.6	8.4	8.5	9.6	8.8	9.3
22	6.8	5.6	6.3	8.3	7.5	7.9	8.7	8.3	8.5	9.6	8.9	9.4
23	7.1	6.4	6.8	8.7	7.6	8.2	8.7	8.4	8.5	9.6	9.0	9.4
24	6.7	5.4	6.2	8.3	7.8	8.1	8.6	8.4	8.5	9.7	8.9	9.4
25	6.1	5.2	5.7	8.6	7.8	8.2	8.8	8.5	8.6	9.5	9.2	9.4
26	7.5	5.3	6.5	8.6	7.6	8.3	9.2	8.6	8.9	9.4	8.5	9.2
27	6.8	5.7	6.3	8.6	7.5	8.3	9.1	8.8	9.0	9.8	9.1	9.4
28	6.1	5.1	5.8	11.6	8.2	9.6	9.1	8.9	9.0	9.9	9.4	9.6
29	7.8	5.2	6.7	8.3	8.1	8.2	9.0	8.8	8.9	9.8	9.3	9.6
30	7.2	6.2	6.8	8.3	7.8	8.1	9.2	8.8	9.0	10.0	9.4	9.7
31	7.7	6.0	6.9	---	--	---	9.2	8.9	9.0	9.9	9.5	9.7
MONTH	9.8	5.1	7.0	11.6	5.2	7.7	9.2	7.4	8.4	10.1	8.5	9.5



## CUMBERLAND RIVER BASIN

03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	10.0	9.5	9.8	9.3	8.5	9.0	12.9	8.6	11.8	7.8	6.3	7.3
2	10.2	9.1	10.0	10.0	8.9	9.6	11.0	6.2	9.5	8.3	6.2	7.3
3	10.2	9.0	9.8	10.1	9.4	9.8	11.1	7.8	10.0	8.8	6.9	8.1
4	10.0	9.7	9.9	10.4	9.7	10.1	10.8	8.4	9.9	8.7	7.3	8.0
5	10.6	9.7	10.2	11.0	9.8	10.4	10.6	7.1	9.5	7.8	6.2	6.9
6	10.5	10.1	10.3	11.0	10.6	10.8	9.3	6.8	8.7	7.4	5.6	6.8
7	10.0	9.8	9.9	11.0	10.4	10.8	9.0	5.4	8.0	8.0	6.6	7.0
8	9.9	9.6	9.7	12.0	10.6	11.1	8.6	5.4	7.7	7.8	6.0	7.1
9	9.9	9.4	9.6	11.9	10.8	11.4	8.8	6.9	8.0	8.0	6.2	7.2
10	9.6	9.1	9.5	11.3	10.4	10.9	9.1	7.3	8.5	8.4	5.9	7.3
11	9.7	8.5	9.3	11.6	9.9	11.0	9.5	6.9	8.2	7.2	5.6	6.5
12	10.3	9.6	9.9	11.5	9.9	11.1	10.8	7.0	9.0	6.6	5.2	5.9
13	10.3	9.7	10.0	12.6	11.1	12.0	10.9	7.0	9.1	6.9	5.1	6.1
14	10.3	9.1	10.0	12.8	10.9	11.6	10.0	7.0	8.6	7.5	5.0	6.4
15	10.4	9.2	9.9	11.1	10.7	10.9	9.4	7.3	7.9	8.0	5.4	6.9
16	10.7	9.8	10.3	11.1	10.2	10.7	9.3	5.8	8.1	7.5	5.1	6.7
17	10.9	10.0	10.3	10.6	9.4	10.0	9.3	7.5	8.6	8.0	4.7	6.6
18	12.6	11.3	12.0	11.1	9.0	10.5	9.6	6.6	8.8	7.3	5.7	6.4
19	11.7	8.6	9.9	11.1	8.5	10.0	9.9	7.3	8.8	6.5	4.9	6.0
20	8.6	8.2	8.4	9.5	8.3	8.9	10.0	6.8	8.7	7.1	5.1	6.4
21	8.4	6.8	8.0	9.3	8.3	9.0	8.6	7.3	7.8	8.1	5.7	7.2
22	7.9	6.3	7.6	9.7	8.4	9.3	8.6	6.5	7.9	9.5	6.2	8.0
23	8.2	6.8	7.8	12.1	9.3	10.9	10.0	7.8	9.1	8.5	7.1	8.1
24	8.0	7.4	7.8	11.8	9.8	11.0	11.5	8.5	10.1	8.8	6.9	7.7
25	8.2	7.5	8.0	11.6	10.0	10.9	9.3	8.6	9.5	8.1	6.5	7.2
26	8.4	7.9	8.1	---	---	---	11.1	9.3	10.2	8.2	4.9	7.0
27	8.5	7.8	8.2	---	---	---	10.4	8.7	9.9	8.0	5.0	6.6
28	9.1	8.0	8.6	---	---	---	9.0	6.7	8.2	8.6	5.9	7.5
29	---	---	---	---	---	---	8.1	6.5	7.3	8.8	6.4	7.5
30	---	---	---	---	---	---	8.2	6.6	7.3	8.6	6.9	7.7
31	---	---	---	---	---	---	---	---	---	7.7	6.2	6.8
MONTH	12.6	6.3	9.4	---	---	---	12.9	5.4	8.8	9.5	4.7	7.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	7.0	5.1	6.3	5.1	3.5	4.5	5.4	3.1	4.2	5.7	3.9	5.2
2	6.6	4.6	6.0	5.0	3.3	4.5	4.3	3.1	3.6	6.4	3.8	5.4
3	7.6	4.2	6.1	6.1	3.3	4.9	5.8	3.9	5.0	6.5	3.2	5.2
4	6.6	4.1	5.9	6.4	4.6	5.6	7.0	4.4	5.7	15.0	3.5	8.5
5	6.1	5.0	5.6	6.7	5.0	5.8	6.1	4.5	5.5	7.3	6.0	6.3
6	6.5	4.2	5.4	5.2	4.4	4.9	6.2	4.2	5.3	6.9	5.8	6.3
7	6.3	5.0	5.6	5.0	3.3	4.4	5.5	4.3	4.9	6.6	4.5	6.0
8	7.0	4.9	6.3	5.3	3.8	4.4	6.1	4.2	5.2	10.6	4.5	7.0
9	7.3	5.8	6.4	5.2	3.5	4.3	6.9	3.7	5.6	8.6	5.5	7.3
10	7.7	6.0	7.3	---	---	---	7.3	3.4	6.0	11.3	5.2	8.4
11	8.6	5.6	6.8	---	---	---	6.2	3.4	5.2	9.5	6.7	8.3
12	6.6	5.1	6.0	---	---	---	5.8	4.0	5.1	7.1	5.7	6.3
13	8.4	3.8	6.5	---	---	---	6.8	3.3	5.3	8.8	5.1	7.5
14	8.8	6.4	7.4	---	---	---	6.3	3.4	5.1	10.4	6.0	7.9
15	7.4	5.9	6.6	---	---	---	5.5	3.6	4.6	9.0	5.8	7.4
16	5.8	4.1	4.7	---	---	---	5.1	3.4	4.1	6.0	4.1	5.2
17	4.6	3.1	3.8	5.2	3.7	4.4	5.1	3.1	4.4	11.4	3.2	6.3
18	6.1	3.1	5.0	4.2	3.1	3.7	5.2	3.5	4.6	8.8	4.4	6.3
19	5.7	3.9	4.8	4.3	3.1	3.8	5.2	3.1	4.3	5.9	3.7	5.1
20	5.1	3.6	4.5	4.7	3.5	4.2	5.6	3.1	4.7	6.6	3.2	5.2
21	5.0	3.2	4.4	4.6	3.1	4.0	6.4	4.3	5.4	6.9	3.6	5.4
22	4.0	3.5	3.8	4.4	3.5	4.0	6.1	4.0	5.0	6.2	4.0	5.1
23	3.4	3.0	3.2	4.8	3.9	4.4	4.8	3.7	4.3	6.8	3.5	5.3
24	3.4	3.0	3.2	5.2	3.8	4.5	5.1	4.0	4.7	6.3	3.3	4.6
25	4.0	3.2	3.7	5.0	3.4	4.4	5.2	3.1	4.5	---	---	---
26	4.0	3.2	3.7	4.9	3.3	4.4	5.9	3.3	4.7	---	---	---
27	4.2	3.8	3.4	4.9	3.5	4.3	5.1	3.3	4.2	---	---	---
28	4.6	3.1	4.1	4.6	3.8	4.2	5.8	3.1	4.2	---	---	---
29	4.5	3.1	4.2	4.6	3.3	4.0	7.8	4.6	6.2	---	---	---
30	5.6	3.6	4.6	5.0	3.4	4.2	7.1	5.1	6.0	---	---	---
31	---	---	---	4.9	3.1	3.9	5.9	4.7	5.3	---	---	---
MONTH	8.8	3.0	5.2	6.7	3.1	4.4	7.8	3.1	4.9	15.0	3.2	6.3



## CUMBERLAND RIVER BASIN

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03426500 CUMBERLAND RIVER BELOW OLD HICKORY, TN

LOCATION.--Lat 36°15'39", long 86°40'30", Davidson County, Hydrologic Unit 05130202, near left bank on downstream end of pier of bridge on State Highway 45, 1.5 mi west of Old Hickory, 2.1 mi east of Madison, 3.3 mi downstream from Mansker Creek, 4.1 mi downstream from Old Hickory Dam, and at mile 212.1.

DRAINAGE AREA.--11,735 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1931 to September 1942, October 1947 to September 1986 (discontinued). Prior to July 1953, published as "at dam 3, near Old Hickory."

REVISED RECORDS.--WSP 923: 1932-39. WSP 1113: 1940(m). WSP 1910: Drainage area, at sites used prior to June 11, 1954. WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 380.00 ft above National Geodetic Vertical Datum of 1929. See WSP 1726 for history of changes prior to Oct. 1, 1956. Since Apr. 1, 1957, auxiliary gage at Old Hickory Dam 4.1 mi upstream from base gage at same datum.

REMARKS.--Records good except for estimated daily discharges, Nov. 8 to Dec. 17, which are fair. Flow regulated by six lakes or reservoirs (see p. 88).

AVERAGE DISCHARGE.--50 years (water years 1932-42, 1948-86), 18,980 ft<sup>3</sup>/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 173,000 ft<sup>3</sup>/s, Jan. 29, 1937; maximum gage height, 48.13 ft, Mar. 14, 1975; minimum daily discharge, 86 ft<sup>3</sup>/s, Aug. 15, 1936; minimum gage height since filling of Cheatham Lake on Oct. 1, 1956, 3.49 ft, Sept. 10, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1793, 57.4 ft Dec. 31, 1926, present site and datum, from profile by U. S. Army Corps of Engineers, discharge, 200,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 64,800 ft<sup>3</sup>/s Feb. 18; maximum gage height, 27.37 ft Feb. 18; minimum daily discharge, 2,070 ft<sup>3</sup>/s Apr. 14; minimum gage height, 4.17 ft Apr. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5080	8560	13000	15400	11100	10700	4420	8670	5710	5960	12300	6680
2	4230	8940	15000	17600	8580	10200	6070	11100	5820	9630	11200	6880
3	5670	5510	15000	17900	10100	12400	7510	9530	5610	12100	8190	6600
4	6050	3790	20000	14900	13200	10300	8150	5240	8570	10900	7450	26200
5	6040	3910	22000	12600	17300	11700	7370	4350	13600	8810	7740	25400
6	5300	3740	23000	7740	19100	11800	6230	4580	14100	6520	8600	16400
7	4680	5930	20000	12200	18400	12900	4780	5410	11300	6780	11400	12000
8	5240	9500	18000	15700	13300	11100	6000	6820	21300	7340	11000	9300
9	7250	9000	19000	17000	13300	9850	7920	6870	17500	8520	10000	8070
10	9200	6000	18000	16600	12900	6960	10800	6230	21900	10400	7870	7800
11	7360	5800	20000	14400	10300	8670	10200	5590	20000	12600	7660	12100
12	7880	5000	25000	8610	11800	11600	9680	3540	11900	9880	8500	14300
13	4670	5000	28000	7170	14200	58400	7240	5470	11600	6540	10800	12900
14	4770	5190	29000	6100	12600	45400	2070	5900	9830	7890	12700	10700
15	4830	5500	30000	8460	14800	29800	4510	6720	6020	7120	11700	6500
16	6610	5000	28000	9430	12500	16200	5580	7190	5410	9960	10000	6300
17	9470	5130	27200	8490	15700	13600	9260	6870	5980	12000	8460	7580
18	8100	6500	29400	5180	60100	11500	9420	4850	6370	12600	7720	9320
19	8340	8500	27400	2810	45200	9640	8230	5310	6050	9280	7900	8990
20	3920	10000	25000	7010	20900	11600	5320	6300	6500	7810	8570	9550
21	5360	13100	29600	6560	9140	11700	3190	7470	6380	6360	11400	7430
22	7110	12900	19100	6680	8200	10300	5150	7500	6220	7130	10000	6640
23	14000	12500	20000	6420	7350	10500	7180	7220	5960	10400	10400	6940
24	13900	9040	21300	9360	11200	9760	9700	18300	7580	10100	9200	8250
25	11700	8390	19800	8340	14500	8400	15100	9720	7610	9630	7420	8710
26	8090	9500	24900	5460	15700	7810	7740	7650	9470	9730	7180	9380
27	6130	13000	27500	5110	17300	6220	6880	5460	10700	7000	8250	9250
28	5670	50000	22200	7710	15100	7570	4460	12200	9270	6760	10300	5600
29	5070	40000	15400	13800	---	7750	4460	16600	7550	7390	11900	5340
30	5660	25000	13500	16000	---	5150	4260	14000	5970	9500	11300	6330
31	6250	---	12900	13500	---	4670	---	8000	---	11100	8370	---
TOTAL	213630	319930	678200	324240	453870	414150	208880	240660	291780	277740	295480	297440
MEAN	6891	10660	21880	10460	16210	13360	6963	7763	9726	8959	9532	9915
MAX	14000	50000	30000	17900	60100	58400	15100	18300	21900	12600	12700	26200
MIN	3920	3740	12900	2810	7350	4670	2070	3540	5410	5960	7180	5340
CAL YR 1985	TOTAL	4872230		MEAN	13350	MAX	50000	MIN	3740			
WTR YR 1986	TOTAL	4016000		MEAN	11000	MAX	60100	MIN	2070			

## CUMBERLAND RIVER BASIN

03426800 EAST FORK STONES RIVER AT WOODBURY, TN

LOCATION.--Lat 35°49'41", long 86°04'36", Cannon County, Hydrologic Unit 05130203, on center pier on downstream side of bridge on U. S. Highway 70S, at Woodbury, 0.4 mi downstream from Doolittle Branch, and at mile 45.6.

DRAINAGE AREA.--39.1 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1932-33, 1950, 1954, 1962, occasional low-flow measurements. October 1962 to current year.

REVISED RECORDS.--WSP 1910; Drainage area. WSP 2110: 1963, 1964(M), 1965.

GAGE.--Water-stage recorder. Datum of gage is 676.23 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--24 years, 66.7 ft<sup>3</sup>/s, 23.16 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,200 ft<sup>3</sup>/s, Mar. 15, 1973, gage height, 16.75 ft, from rating curve extended above 3,000 ft<sup>3</sup>/s on basis of velocity-area study and contracted-opening measurement at gage height 16.52 ft at bridge 4.6 mi downstream; minimum, 2.1 ft<sup>3</sup>/s, Nov. 13, 1980 (result of unnatural regulation upstream).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1902, that of Mar. 15, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 12	2300	*1,810	*8.28				

Minimum discharge, 4.0 ft<sup>3</sup>/s Aug. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	111	13	72	39	13	30	26	11	28	18	5.4	12	
2	75	13	67	31	67	29	25	11	25	54	5.2	13	
3	43	15	47	28	141	29	24	10	27	29	5.1	11	
4	33	24	37	25	102	27	22	9.9	64	16	5.0	517	
5	27	21	32	22	419	26	21	9.9	55	11	4.8	110	
6	22	16	28	19	230	26	21	9.8	36	9.6	4.7	41	
7	18	15	24	18	152	24	23	9.6	29	8.9	5.6	25	
8	16	13	22	16	111	22	26	9.4	26	8.2	6.0	16	
9	15	13	20	16	91	21	24	9.0	21	7.8	5.5	13	
10	14	12	18	16	81	22	20	8.6	19	7.6	6.9	10	
11	14	12	17	15	75	21	19	8.6	18	9.1	10	9.7	
12	13	12	18	15	65	154	18	8.8	17	8.6	6.6	12	
13	13	11	21	14	61	578	17	9.2	15	7.4	5.6	9.3	
14	13	12	20	14	226	205	17	8.5	14	8.3	5.3	8.0	
15	14	11	19	13	259	162	17	7.8	13	9.3	5.0	7.3	
16	13	19	18	13	173	115	16	7.5	12	7.4	6.1	7.0	
17	12	28	17	13	582	81	16	7.3	12	6.8	10	6.6	
18	12	27	16	13	612	67	15	9.0	11	6.5	8.0	6.4	
19	12	22	15	21	228	135	14	9.8	11	6.2	6.3	6.6	
20	12	18	16	17	126	89	16	9.0	10	6.3	5.5	6.8	
21	12	16	15	15	84	66	19	8.0	9.8	6.0	5.3	6.3	
22	12	15	15	14	64	55	17	7.6	9.7	5.7	5.0	6.1	
23	12	14	15	13	53	50	14	7.4	9.4	5.5	4.8	6.0	
24	13	13	15	13	49	44	14	9.9	9.3	5.4	4.6	5.9	
25	12	13	14	14	43	39	13	16	8.3	5.8	4.5	5.5	
26	11	13	12	15	41	36	13	13	7.4	6.3	10	5.3	
27	11	39	13	13	39	33	13	54	7.3	6.0	12	5.6	
28	11	134	13	13	33	31	13	291	7.7	6.3	12	5.8	
29	11	87	13	13	---	30	12	131	9.1	6.9	7.9	5.6	
30	11	53	12	13	---	28	11	53	10	5.8	6.2	5.5	
31	13	---	33	13	---	27	---	35	---	5.3	6.4	---	
TOTAL	631	724	714	527	4220	2302	536	809.6	551.0	311.0	201.3	905.3	
MEAN	20.4	24.1	23.0	17.0	151	74.3	17.9	26.1	18.4	10.0	6.49	30.2	
MAX	111	134	72	39	612	578	26	291	64	54	12	517	
MIN	11	11	12	13	13	21	11	7.3	7.3	5.3	4.5	5.3	
CFSM	.52	.62	.59	.43	3.86	1.90	.46	.67	.47	.26	.17	.77	
IN.	.60	.69	.68	.50	4.01	2.19	.51	.77	.52	.30	.19	.86	
CAL YR 1985	TOTAL	14372.7		MEAN	39.4	MAX	493	MIN	8.2	CFSM	1.01	IN.	13.67
WTR YR 1986	TOTAL	12432.2		MEAN	34.1	MAX	612	MIN	4.5	CFSM	.87	IN.	11.83

## 03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN

LOCATION.--Lat 35°55'06", long 86°20'02", Rutherford County, Hydrologic Unit 05130203, on left bank 100 ft upstream from highway bridge, 2.5 mi southwest of Lascassas, 3.7 mi downstream from Bradley Creek, 6.0 mi northeast of the courthouse in Murfreesboro, and at mile 15.4.

DRAINAGE AREA.--262 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1950 to November 1958, May 1963 to current year. Prior to February 1951 monthly discharge only, published in WSP 1726.

REVISED RECORDS.--WSP 1910: Drainage Area. WDR-TN-75-1: 1955(M), 1963(M), 1970(M), 1973 (M)(P).

GAGE.--Water-stage recorder. Datum of gage is 507.88 ft Sandy Hook datum (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1973, water-stage recorder 100 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Apr. 2-18. Records good. Frequent diurnal fluctuation at low flow caused by small mills above station. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--31 years (water years 1950-57, 1964-86), 460 ft<sup>3</sup>/s, 23.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,200 ft<sup>3</sup>/s, Mar. 13, 1975, gage height, 39.48 ft; minimum, 0.2 ft<sup>3</sup>/s, Oct. 23, 1953, gage height, 2.22 ft; minimum daily, 0.4 ft<sup>3</sup>/s, Aug. 31, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1902, that of Mar. 13, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft<sup>3</sup>/s and maximum(\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 18	0315	7,890	18.25	May 28	2145	7,190	17.32
Mar. 13	0600	11,600	22.61	Sept. 4	0600	*34,900	*37.97

Minimum discharge, 7.7 ft<sup>3</sup>/s Aug. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	397	27	395	125	52	142	102	39	166	26	16	29	
2	747	25	708	150	262	128	98	39	110	488	13	44	
3	308	28	388	128	2100	120	95	35	155	277	10	449	
4	172	47	263	111	781	113	92	34	434	102	8.9	23300	
5	115	136	196	97	2210	103	88	32	304	52	8.7	4720	
6	84	83	157	84	1380	96	85	32	335	36	8.4	1130	
7	67	57	127	76	1130	90	82	31	291	30	9.2	528	
8	56	48	108	71	651	82	90	29	212	26	11	292	
9	49	43	95	64	443	76	100	29	521	23	11	199	
10	45	38	83	60	337	74	90	27	552	21	13	145	
11	42	34	75	59	290	74	80	25	216	20	21	109	
12	39	34	74	57	229	226	73	25	134	19	21	169	
13	38	32	100	55	200	6770	68	26	89	28	20	144	
14	36	32	148	53	1400	1880	65	26	65	256	17	86	
15	36	31	131	51	2350	2240	63	24	52	54	14	66	
16	36	32	115	49	1130	1100	61	24	44	31	12	57	
17	36	366	103	48	3940	708	59	23	38	27	12	46	
18	34	765	91	47	5250	523	58	22	33	23	14	39	
19	32	277	78	49	1730	713	56	24	29	21	19	54	
20	31	161	74	107	932	650	54	26	27	19	19	277	
21	29	115	70	125	635	452	60	26	25	19	17	138	
22	29	95	65	98	457	348	71	24	23	16	14	75	
23	29	84	63	81	353	290	65	23	21	14	12	51	
24	30	72	63	71	295	247	55	23	22	14	11	39	
25	29	63	61	68	258	208	51	25	20	12	9.1	34	
26	29	58	55	67	218	180	49	33	19	11	8.6	30	
27	27	175	50	65	195	161	47	34	17	10	9.7	27	
28	27	855	50	59	168	144	45	2270	16	12	16	25	
29	26	750	48	55	---	130	43	2110	18	28	26	23	
30	25	442	47	56	---	119	41	548	31	21	29	23	
31	27	---	48	55	---	111	---	273	---	19	27	---	
TOTAL	2707	5005	4129	2341	29376	18298	2086	5961	4019	1755	457.6	32348	
MEAN	87.3	167	133	75.5	1049	590	69.5	192	134	56.6	14.8	1078	
MAX	747	855	708	150	5250	6770	102	2270	552	488	29	23300	
MIN	25	25	47	47	52	74	41	22	16	10	8.4	23	
CFSM	.33	.64	.51	.29	4.00	2.25	.27	.73	.51	.22	.06	4.11	
IN.	.38	.71	.59	.33	4.17	2.60	.30	.85	.57	.25	.06	4.59	
CAL YR 1985	TOTAL	82067		MEAN	225	MAX	3870	MIN	19	CFSM	.86	IN.	11.65
WTR YR 1986	TOTAL	108482.6		MEAN	297	MAX	23300	MIN	8.4	CFSM	1.13	IN.	15.40



## CUMBERLAND RIVER BASIN

03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to current year.

WATER TEMPERATURE: October 1975 to current year.

DISSOLVED OXYGEN: January 1980 to September 1981.

INSTRUMENTATION.--Water-quality monitor since October 1975.

REMARKS.--Interruptions in the record were due to monitor malfunction.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 697 microsiemens, Dec. 6, 1979; minimum, 40 microsiemens, Sept. 4, 1986.

WATER TEMPERATURES: Maximum, 31.5°C, July 8, 14-16, 1977, July 16, 1980, July 17, 1982; minimum, 0.0°C, Jan. 21, 1977, Jan. 21, 22, 1985.

DISSOLVED OXYGEN: Maximum recorded, 13.6 mg/L, Feb. 14, 25, 26, 1981; minimum, 4.4 mg/L, July 18, 19, 1981.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 455 microsiemens, Nov. 23-25; minimum, 40 microsiemens, Sept. 4.

WATER TEMPERATURE: Maximum, 31°C, July 20; minimum, 1.0°C, Dec. 22, 26, 29, 30.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	363	353	356	444	424	434	---	---	---
2	---	---	---	370	359	366	442	386	410	---	---	---
3	---	---	---	367	360	363	422	374	397	---	---	---
4	---	---	---	363	353	358	432	413	422	---	---	---
5	---	---	---	371	353	362	438	426	433	---	---	---
6	---	---	---	400	373	391	438	434	436	---	---	---
7	405	402	404	400	392	396	438	420	431	---	---	---
8	405	400	403	401	393	395	431	425	428	---	---	---
9	401	396	399	412	401	407	431	417	423	---	---	---
10	399	391	396	417	413	415	422	406	415	---	---	---
11	394	386	391	422	415	419	417	394	411	---	---	---
12	392	384	389	422	417	420	413	403	410	---	---	---
13	388	381	385	420	414	418	426	419	423	---	---	---
14	386	380	383	416	412	414	431	418	425	---	---	---
15	382	378	380	414	409	412	439	431	437	---	---	---
16	379	375	378	412	403	409	440	436	438	---	---	---
17	377	374	375	414	392	399	440	435	438	---	---	---
18	376	372	374	406	324	358	441	432	437	---	---	---
19	384	373	377	438	386	419	438	431	435	---	---	---
20	389	372	379	446	439	443	434	424	429	---	---	---
21	390	375	381	453	444	449	428	422	425	---	---	---
22	385	370	377	454	450	452	425	416	421	---	---	---
23	391	367	380	455	451	453	419	412	416	---	---	---
24	377	363	369	455	450	452	416	411	414	---	---	---
25	375	367	370	455	449	452	415	403	409	---	---	---
26	374	367	370	454	445	449	409	398	404	---	---	---
27	371	363	367	448	427	437	410	396	403	---	---	---
28	388	372	383	441	410	426	404	391	397	---	---	---
29	387	366	375	423	396	412	400	383	392	---	---	---
30	371	356	362	442	423	434	397	377	387	---	---	---
31	360	356	358	---	---	---	385	378	381	382	380	381
MONTH	405	356	380	455	324	411	444	374	418	---	---	---



## 03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	393	378	388	402	398	400	---	---	---	321	316	319
2	401	377	393	398	397	398	---	---	---	320	317	319
3	392	307	348	399	395	397	---	---	---	319	316	318
4	427	395	414	395	392	394	---	---	---	321	318	319
5	437	311	373	395	388	391	---	---	---	323	319	322
6	399	348	379	393	386	390	---	---	---	326	322	324
7	401	381	389	387	377	384	---	---	---	327	323	325
8	420	404	414	382	373	378	---	---	---	327	323	325
9	428	421	425	380	371	376	---	---	---	327	323	325
10	430	427	428	377	372	374	---	---	---	326	321	323
11	429	426	427	374	365	370	---	---	---	326	321	322
12	431	427	429	370	288	358	---	---	---	321	317	319
13	433	431	432	244	149	187	---	---	---	316	311	314
14	435	270	398	---	---	---	---	---	---	315	311	313
15	388	258	332	---	---	---	---	---	---	316	313	315
16	419	391	405	---	---	---	---	---	---	318	314	316
17	425	256	342	---	---	---	---	---	---	317	316	316
18	343	258	298	---	---	---	---	---	---	317	311	315
19	381	348	367	---	---	---	---	---	---	312	308	309
20	388	365	378	---	---	---	---	---	---	312	308	309
21	394	389	393	---	---	---	---	---	---	317	307	309
22	398	395	397	---	---	---	310	308	309	315	309	311
23	403	398	400	---	---	---	310	308	309	322	311	314
24	404	401	402	---	---	---	310	306	308	318	310	315
25	405	402	403	---	---	---	312	307	309	312	308	310
26	405	402	404	---	---	---	316	312	314	310	304	306
27	406	403	405	---	---	---	318	315	316	310	305	308
28	406	401	404	---	---	---	318	315	317	307	188	269
29	---	---	---	---	---	---	316	315	316	345	201	297
30	---	---	---	---	---	---	319	315	317	372	348	363
31	---	---	---	---	---	---	---	---	---	384	373	378
MONTH	437	256	392	---	---	---	---	---	---	384	188	318
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	391	385	388	341	319	327	277	259	262	313	310	312
2	390	387	389	339	155	264	268	259	263	314	309	311
3	390	229	377	326	279	302	273	261	264	321	88	265
4	346	220	320	356	314	335	267	259	262	212	40	117
5	365	329	350	365	347	353	275	261	264	329	218	284
6	378	358	370	362	345	351	270	256	263	366	329	347
7	387	359	375	362	346	352	271	260	264	388	366	376
8	398	384	392	367	348	353	279	262	268	402	387	397
9	402	220	359	356	346	352	270	266	267	407	399	402
10	396	249	344	353	343	346	272	267	269	---	---	---
11	409	394	404	352	327	342	278	268	274	---	---	---
12	413	405	408	350	332	341	299	276	283	---	---	---
13	406	393	399	347	326	338	290	278	283	---	---	---
14	403	389	395	273	134	196	305	285	290	---	---	---
15	400	385	390	293	242	271	319	290	295	402	400	400
16	388	377	383	288	262	278	297	286	292	400	394	398
17	386	367	376	286	275	279	310	287	298	394	384	390
18	375	365	370	284	269	278	310	286	295	389	381	387
19	364	343	360	277	265	270	297	282	285	383	360	380
20	364	351	358	272	260	267	302	283	287	365	224	310
21	367	350	356	273	250	262	312	285	288	384	356	368
22	361	346	353	281	248	261	312	290	293	381	377	379
23	358	339	348	287	251	263	314	296	300	379	376	377
24	367	329	341	278	249	261	314	299	303	381	377	379
25	359	334	339	280	256	264	318	300	306	380	376	378
26	354	331	339	277	255	263	333	301	307	---	---	---
27	357	328	338	278	262	267	313	298	307	---	---	---
28	354	330	338	281	261	270	305	297	301	---	---	---
29	344	313	327	270	249	260	305	300	303	---	---	---
30	335	317	322	267	251	260	308	302	306	---	---	---
31	---	---	---	267	259	263	312	310	311	---	---	---
MONTH	413	220	364	367	134	293	333	256	286	---	---	---

## CUMBERLAND RIVER BASIN

03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	18.0	17.5	17.5	14.5	13.0	14.0	---	---	---
2	---	---	---	17.5	16.0	17.0	13.0	9.5	11.5	---	---	---
3	---	---	---	16.0	14.5	15.0	9.5	7.0	8.5	---	---	---
4	---	---	---	14.0	13.0	13.5	8.0	7.0	7.5	---	---	---
5	---	---	---	13.0	12.5	12.5	9.0	7.5	8.5	---	---	---
6	---	---	---	13.0	11.5	12.5	8.5	7.5	8.0	---	---	---
7	15.5	14.0	15.0	12.0	11.0	11.5	7.0	6.0	6.5	---	---	---
8	15.5	13.5	15.0	11.0	9.5	10.5	7.5	6.5	7.0	---	---	---
9	16.0	14.5	15.5	12.0	10.0	11.0	8.5	7.0	7.5	---	---	---
10	17.0	15.5	16.0	13.5	11.0	12.5	9.0	7.5	8.5	---	---	---
11	18.5	16.0	17.5	14.0	12.5	13.5	10.5	9.0	10.0	---	---	---
12	19.0	17.5	18.5	15.0	14.0	14.5	10.5	9.5	10.0	---	---	---
13	20.0	18.5	19.0	16.0	14.5	15.0	9.5	8.0	9.0	---	---	---
14	20.0	19.5	20.0	16.5	15.5	16.0	8.0	5.5	6.5	---	---	---
15	20.5	19.5	20.0	17.5	16.0	16.5	5.5	4.5	5.0	---	---	---
16	20.0	19.0	19.5	17.0	16.0	17.0	5.0	4.0	4.5	---	---	---
17	19.0	17.5	18.0	15.5	14.5	15.0	5.5	4.0	5.0	---	---	---
18	19.5	18.5	19.0	16.0	14.5	15.0	5.0	3.0	4.0	---	---	---
19	20.0	19.5	19.5	17.0	15.5	16.5	3.0	2.0	2.5	---	---	---
20	20.0	19.5	20.0	16.5	14.0	15.5	3.5	2.5	3.0	---	---	---
21	20.0	19.5	20.0	14.0	13.0	13.5	2.5	1.5	2.0	---	---	---
22	19.5	19.0	19.5	13.0	11.5	12.5	3.5	1.0	2.5	---	---	---
23	19.5	19.0	19.5	12.0	10.5	11.5	4.5	3.5	4.0	---	---	---
24	20.0	19.0	19.5	12.5	11.5	12.0	4.0	3.0	4.0	---	---	---
25	20.0	19.0	19.5	14.0	12.5	13.0	3.0	1.5	2.0	---	---	---
26	19.0	17.5	18.5	15.5	13.5	14.5	1.5	1.0	1.5	---	---	---
27	18.5	18.0	18.5	16.5	15.5	16.0	3.5	1.5	2.0	---	---	---
28	18.5	18.0	18.0	16.5	15.5	16.0	3.0	2.0	2.5	---	---	---
29	18.5	18.0	18.0	15.5	14.5	15.0	2.0	1.0	1.5	---	---	---
30	18.0	17.0	17.5	14.5	14.0	14.5	2.5	1.0	1.5	---	---	---
31	17.5	17.0	17.5	---	---	---	2.5	2.0	2.5	3.5	2.5	3.0
MONTH	20.5	13.5	18.5	18.0	9.5	14.0	14.5	1.0	5.5	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	6.0	3.5	5.0	8.5	6.5	7.5	---	---	---	21.0	20.0	20.5
2	10.0	6.0	6.5	8.5	6.0	7.5	---	---	---	20.0	18.0	19.0
3	13.5	10.5	12.0	9.5	7.5	8.5	---	---	---	19.0	17.0	18.0
4	14.5	13.0	13.5	8.5	7.5	8.0	---	---	---	19.0	15.5	17.5
5	14.5	14.0	14.0	10.0	7.5	8.5	---	---	---	20.0	17.0	19.0
6	14.0	13.0	13.5	10.5	8.5	9.5	---	---	---	21.5	19.5	20.5
7	13.0	11.5	12.0	9.5	8.0	8.5	---	---	---	23.0	20.5	22.0
8	11.5	10.5	11.0	9.5	7.5	8.5	---	---	---	23.5	21.5	22.5
9	10.5	9.5	10.0	12.0	8.5	10.5	---	---	---	24.0	22.0	23.0
10	9.5	7.0	8.5	13.5	11.5	12.5	---	---	---	24.0	22.0	23.0
11	7.0	5.5	6.0	15.0	12.5	13.5	---	---	---	23.5	22.5	23.0
12	5.5	4.5	5.0	16.0	14.0	15.0	---	---	---	23.0	22.0	22.5
13	5.0	3.5	4.5	15.0	14.5	15.0	---	---	---	23.5	21.5	22.5
14	5.5	4.0	4.5	---	---	---	---	---	---	24.0	22.5	23.5
15	8.0	4.5	6.5	---	---	---	---	---	---	24.5	23.5	24.0
16	10.0	8.0	9.0	---	---	---	---	---	---	24.5	23.0	24.0
17	11.5	10.5	11.0	---	---	---	---	---	---	25.0	23.5	24.5
18	13.5	11.0	12.0	---	---	---	---	---	---	24.5	23.0	24.0
19	14.0	12.5	13.5	---	---	---	---	---	---	22.5	20.5	21.5
20	14.0	12.0	13.0	---	---	---	---	---	---	20.5	19.0	20.0
21	13.5	12.0	12.5	---	---	---	---	---	---	19.0	18.0	18.5
22	12.0	10.0	11.0	---	---	---	15.5	14.0	15.0	19.5	17.5	19.0
23	10.5	9.0	9.5	---	---	---	15.5	12.5	14.5	20.5	19.0	20.0
24	10.0	8.5	9.5	---	---	---	17.0	13.0	15.0	21.5	20.0	20.5
25	10.0	8.0	9.0	---	---	---	19.0	14.5	17.0	21.5	20.0	20.5
26	11.5	8.5	10.0	---	---	---	20.5	17.0	19.0	21.0	20.5	21.0
27	11.0	10.0	10.5	---	---	---	21.5	18.5	20.0	21.5	20.5	21.0
28	10.0	8.5	9.0	---	---	---	20.5	19.0	20.0	21.0	18.5	20.0
29	---	---	---	---	---	---	21.0	18.5	20.0	19.5	18.0	18.5
30	---	---	---	---	---	---	21.5	12.0	20.0	20.5	18.0	19.5
31	---	---	---	---	---	---	---	---	---	22.0	20.0	21.0
MONTH	14.5	3.5	9.5	---	---	---	---	---	---	25.0	15.5	21.0

## CUMBERLAND RIVER BASIN

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03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.5	20.0	21.5	28.0	26.5	27.5	28.5	26.5	27.5	---	---	---
2	23.5	21.5	22.5	27.5	23.0	25.5	27.5	26.0	26.5	---	---	---
3	23.5	22.0	23.0	24.5	22.0	23.5	26.5	24.5	25.5	---	---	---
4	22.0	20.5	21.5	25.5	22.5	24.0	26.5	24.0	25.0	---	---	---
5	21.0	20.0	20.5	26.5	23.5	25.0	27.0	23.5	25.5	---	---	---
6	21.0	19.5	20.5	26.5	24.5	26.0	25.5	24.0	25.0	---	---	---
7	21.5	19.5	20.5	27.5	25.0	26.5	25.5	23.5	24.5	---	---	---
8	22.0	20.5	21.5	28.5	26.0	27.5	25.5	24.0	25.0	---	---	---
9	22.5	21.5	22.0	28.0	27.0	27.5	25.5	24.0	24.5	---	---	---
10	21.5	19.5	20.5	29.0	26.5	27.5	25.5	---	---	---	---	---
11	22.5	20.5	21.5	28.5	26.5	27.5	---	---	---	---	---	---
12	23.5	22.0	22.5	28.5	27.0	28.0	---	---	---	---	---	---
13	23.5	22.0	23.0	28.0	27.0	27.5	---	---	---	---	---	---
14	24.0	21.5	23.0	25.0	22.5	23.5	---	---	---	---	---	---
15	25.0	22.5	23.5	27.0	24.5	25.5	---	---	---	21.5	21.0	21.5
16	25.5	23.0	24.5	28.5	25.5	27.0	---	---	---	23.0	21.0	22.0
17	26.0	23.5	25.0	29.0	27.0	28.0	---	---	---	22.5	21.0	22.0
18	25.5	23.0	24.5	29.5	27.0	28.5	---	---	---	22.5	21.5	22.0
19	25.5	23.0	24.5	30.0	27.5	29.0	---	---	---	22.5	21.5	22.0
20	27.0	24.0	25.5	31.0	28.0	29.5	---	---	---	22.5	20.5	21.5
21	27.5	25.0	26.0	30.0	27.5	29.0	---	---	---	23.0	22.0	22.5
22	28.0	25.5	27.0	29.5	27.0	28.0	---	---	---	23.0	22.0	22.5
23	28.5	26.5	27.5	29.0	26.0	28.0	---	---	---	24.0	22.0	23.0
24	28.0	26.5	27.5	30.0	27.0	28.5	---	---	---	24.5	23.0	24.0
25	28.0	25.5	27.0	30.0	27.5	28.5	---	---	---	24.5	23.0	23.5
26	27.5	25.0	26.5	30.0	27.0	28.5	---	---	---	---	---	---
27	28.0	26.0	27.0	29.5	27.0	28.5	---	---	---	---	---	---
28	27.5	26.0	26.5	29.0	27.0	28.0	---	---	---	---	---	---
29	27.0	26.0	26.5	29.0	27.0	28.0	---	---	---	---	---	---
30	28.0	25.5	27.0	29.0	26.5	28.0	---	---	---	---	---	---
31	---	---	---	28.0	26.5	27.5	---	---	---	---	---	---
MONTH	28.5	19.5	24.0	31.0	22.0	27.5	---	---	---	---	---	---

## CUMBERLAND RIVER BASIN

03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN

LOCATION.--Lat 35°54'10", long 86°25'48", Rutherford County, Hydrologic Unit 05130203, on left bank at Murfreesboro waste treatment plant outfall, 3,000 ft downstream from Sinking Creek, 4.5 mi northwest of the courthouse in Murfreesboro, and at mile 10.7.

DRAINAGE AREA.--177 mi<sup>2</sup>, includes 17 mi<sup>2</sup> without surface drainage.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1972 to January 1982, January to September 1986.

GAGE.--Water-stage recorder. Datum of gage is 514.95 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 1-15. Records good. Flow is affected by Murfreesboro sewage treatment plant outflow. An annual average of 7.7 ft<sup>3</sup>/s is discharged to the West Fork Stones River 25 ft above the control. Murfreesboro produces an average of 10 ft<sup>3</sup>/s of potable water of which 7.0 ft<sup>3</sup>/s is transbasin diversion from East Fork Stones River basin with the remainder being produced from a well and a spring located in the West Fork Stones River basin. U. S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--9 years (water years 1973-81) 329 ft<sup>3</sup>/s, 25.24 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,000 ft<sup>3</sup>/s, Mar. 13, 1975, gage height 23.80 ft; minimum, 3.0 ft<sup>3</sup>/s, Oct. 13, 1980.

EXTREMES FOR CURRENT RECORD.--JANUARY TO SEPTEMBER 1986: Peak discharges greater than base discharge of 3,700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 18	0645	4,510	11.33	May 28	2345	4,320	11.00
Mar. 13	0915	6,510	14.23	Sept. 4	1715	*19,200	*21.05

Minimum discharge, 7.8 ft<sup>3</sup>/s Aug. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR JANUARY 1986 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				20	21	169	84	16	221	29	13	32
2				27	59	150	75	17	172	132	11	50
3				33	326	132	72	16	180	88	9.1	69
4				32	201	115	66	16	903	47	11	10800
5				30	493	105	60	15	373	34	10	4840
6				28	472	96	55	15	372	30	10	962
7				27	436	85	61	14	380	27	12	573
8				26	310	77	142	13	324	23	11	441
9				25	233	73	199	14	459	21	12	371
10				24	191	67	116	12	388	21	13	297
11				23	175	60	88	12	260	21	21	246
12				22	145	104	74	13	195	18	20	374
13				22	133	3220	67	20	153	19	16	289
14				23	498	949	61	17	124	35	13	226
15				22	1260	1080	54	20	103	34	13	179
16				21	579	686	47	18	88	23	12	152
17				20	1330	507	40	16	74	19	17	130
18				17	2900	423	38	16	63	18	16	111
19				31	1030	532	35	23	53	16	15	162
20				37	700	438	34	24	46	14	14	187
21				55	553	342	44	20	38	15	14	123
22				43	466	277	38	18	34	14	12	103
23				36	407	236	34	17	30	13	11	89
24				33	365	205	31	18	36	11	10	76
25				31	324	179	28	37	30	12	11	67
26				28	274	157	25	33	26	10	13	59
27				27	237	139	23	37	22	10	47	53
28				25	198	126	23	934	20	11	45	48
29				24	---	115	21	1470	23	18	25	42
30				22	---	103	18	457	25	16	18	37
31				22	---	92	---	317	---	14	17	---
TOTAL				856	14316	11039	1753	3685	5215	813	492.1	21188
MEAN				27.6	511	356	58.4	119	174	26.2	15.9	706
MAX				55	2900	3220	199	1470	903	132	47	10800
MIN				17	21	60	18	12	20	10	9.1	32
CFSM				.16	2.89	2.01	.33	.67	.98	.15	.09	3.99
IN.				.18	3.01	2.32	.37	.77	1.10	.17	.10	4.45



## CUMBERLAND RIVER BASIN

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03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--February to September 1986.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February to September 1986.

pH: February to September 1986.

WATER TEMPERATURE: February to September 1986.

DISSOLVED OXYGEN: February to September 1986.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Interruptions in the record were due to monitor malfunctions.

EXTREMES FOR PERIOD FEBRUARY TO SEPTEMBER, 1986.--

SPECIFIC CONDUCTANCE: Maximum, 477 microsiemens, Feb. 11; minimum 199, Mar. 13.

pH: Maximum, 9.0 units, Mar. 24; minimum, 6.9 units, July 3.

WATER TEMPERATURES: Maximum, 32.5°C, July 26; minimum, 3.0°C, Feb. 12, 13, 15.

DISSOLVED OXYGEN: Maximum, 14.5 mg/L, Mar. 6-8; minimum, 2.8 mg/L, July 27, 28.

## SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	434	406	420	401	365	379	358	356	357
2	---	---	---	435	401	417	381	372	378	361	358	359
3	---	---	---	425	390	408	385	380	382	368	361	363
4	---	---	---	419	393	410	386	379	383	372	368	370
5	---	---	---	413	380	398	386	379	383	376	371	374
6	409	388	396	404	375	391	386	369	379	380	376	378
7	444	405	425	394	372	384	379	365	371	387	381	383
8	457	444	453	388	365	379	371	362	365	388	384	386
9	464	456	458	382	355	371	374	362	367	393	384	388
10	469	463	467	373	360	368	388	372	380	388	378	385
11	477	468	472	378	342	361	378	350	365	376	368	373
12	---	---	---	395	333	369	349	330	339	380	368	373
13	---	---	---	327	199	257	333	322	328	383	367	375
14	---	---	---	352	294	316	342	331	336	371	363	367
15	392	235	287	345	337	341	348	342	345	364	352	360
16	393	304	354	364	349	356	357	350	354	363	325	337
17	400	292	374	408	385	397	364	358	362	341	334	338
18	291	228	254	406	338	382	367	359	363	344	330	339
19	363	242	324	402	345	381	366	359	364	393	335	348
20	389	311	368	398	348	369	364	354	359	366	358	362
21	415	346	395	386	346	355	365	354	362	394	359	369
22	421	415	418	396	338	361	368	362	365	449	358	371
23	425	420	421	394	328	370	368	360	364	361	322	357
24	430	423	426	413	342	372	364	355	361	369	351	361
25	430	422	426	398	335	372	359	341	354	382	357	369
26	430	421	427	399	339	371	359	354	357	385	368	378
27	431	425	429	400	335	369	360	355	358	385	367	377
28	432	414	424	399	347	357	360	355	358	391	229	315
29	---	---	---	398	355	373	358	357	358	---	---	---
30	---	---	---	389	359	373	356	354	355	---	---	---
31	---	---	---	403	363	376	---	---	---	---	---	---
MONTH	---	---	---	435	199	372	401	322	362	449	229	365

## CUMBERLAND RIVER BASIN

03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	335	326	331	361	358	360	---	---	---
2	---	---	---	335	266	300	361	356	358	---	---	---
3	---	---	---	286	257	269	357	353	355	---	---	---
4	---	---	---	303	289	299	353	348	351	---	---	---
5	262	222	240	323	303	315	351	347	349	---	---	---
6	320	264	287	325	319	323	354	347	351	---	---	---
7	346	325	337	330	321	327	357	353	355	---	---	---
8	368	348	359	328	308	322	356	352	354	---	---	---
9	367	263	331	331	319	327	358	347	354	---	---	---
10	358	293	323	332	326	329	352	335	347	---	---	---
11	381	360	373	335	330	332	365	334	348	428	383	409
12	383	379	381	335	329	332	374	365	369	457	432	447
13	387	357	374	340	302	331	374	363	368	---	---	---
14	370	356	365	334	321	328	365	356	361	---	---	---
15	362	334	345	351	338	346	364	353	359	---	---	---
16	345	332	340	357	339	349	366	345	356	---	---	---
17	343	325	336	364	348	357	360	347	354	---	---	---
18	336	325	331	369	339	359	386	362	377	---	---	---
19	339	326	332	364	337	357	391	387	390	---	---	---
20	340	326	332	374	350	365	393	388	391	---	---	---
21	351	330	340	385	353	374	387	379	385	---	---	---
22	344	330	339	386	366	376	380	360	371	---	---	---
23	340	325	333	382	375	379	388	360	376	---	---	---
24	329	319	325	373	369	371	389	377	387	---	---	---
25	328	320	325	373	365	370	384	370	377	---	---	---
26	340	325	333	364	353	358	397	381	391	---	---	---
27	343	333	340	357	352	355	---	---	---	---	---	---
28	341	336	339	357	330	349	---	---	---	---	---	---
29	345	337	340	346	335	343	---	---	---	---	---	---
30	341	332	337	357	347	355	---	---	---	---	---	---
31	---	---	---	358	355	357	---	---	---	---	---	---
MONTH	387	222	336	386	257	341	---	---	---	---	---	---

PH (STANDARD UNITS), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1									---	---	7.6	7.4
2									---	---	7.7	7.5
3									---	---	7.7	7.5
4									---	---	7.7	7.6
5									---	---	7.8	7.6
6									8.1	8.0	7.6	7.5
7									8.3	8.1	7.6	7.5
8									8.4	8.3	7.9	7.6
9									8.5	8.3	7.7	7.5
10									8.6	8.4	7.8	7.6
11									8.8	8.5	---	---
12									8.8	8.6	---	---
13									8.7	8.5	---	---
14									8.6	8.3	8.3	7.3
15									8.8	8.0	---	---
16									8.1	8.0	---	---
17									8.1	7.9	8.0	7.6
18									7.9	7.5	8.5	7.8
19									7.9	7.5	8.4	7.7
20									8.0	7.9	8.8	8.1
21									8.1	7.9	8.7	8.1
22									8.3	8.1	8.8	7.7
23									8.5	8.2	8.7	7.4
24									8.6	8.4	9.0	7.5
25									8.5	8.2	8.3	7.5
26									8.2	7.4	8.9	7.4
27									7.7	7.4	7.9	7.2
28									7.6	7.3	8.3	7.0
29									---	---	---	---
30									---	---	---	---
31									---	---	---	---
MONTH									---	---	---	---

03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	7.5	7.4	7.7	7.6	7.5	7.2	7.6	7.4	---	---
2	---	---	7.6	7.5	7.7	7.6	7.3	7.0	7.5	7.4	---	---
3	---	---	7.7	7.6	7.7	7.6	7.2	6.9	7.6	7.4	---	---
4	---	---	7.7	7.6	7.7	7.6	7.4	7.1	7.6	7.4	---	---
5	---	---	7.7	7.6	7.7	7.3	7.4	7.2	7.6	7.4	---	---
6	---	---	7.7	7.6	7.7	7.5	7.5	7.3	7.6	7.4	---	---
7	---	---	7.8	7.6	7.9	7.7	7.6	7.3	7.5	7.4	---	---
8	---	---	7.8	7.6	8.0	7.8	7.6	7.3	7.6	7.4	---	---
9	---	---	7.8	7.6	8.0	7.6	7.5	7.3	7.6	7.4	---	---
10	---	---	7.8	7.6	7.6	7.4	7.4	7.2	7.6	7.4	---	---
11	---	---	8.0	7.6	7.9	7.6	7.4	7.3	7.6	7.4	8.0	7.7
12	---	---	8.0	7.6	8.0	7.7	7.5	7.3	7.7	7.5	8.0	8.0
13	---	---	7.7	7.5	8.1	7.7	7.5	7.3	7.7	7.5	8.0	7.9
14	---	---	7.8	7.5	8.1	7.8	7.4	7.2	7.6	7.4	8.0	7.9
15	---	---	7.7	7.5	8.2	7.8	7.4	7.2	7.5	7.4	7.9	7.9
16	---	---	7.7	7.5	8.2	7.8	7.4	7.2	7.5	7.4	8.0	7.9
17	---	---	7.7	7.5	8.1	7.7	7.4	7.2	7.5	7.4	8.0	8.0
18	8.3	8.0	7.6	7.5	8.1	7.7	---	---	7.6	7.4	8.1	8.0
19	8.2	8.0	7.6	7.5	8.1	7.7	---	---	7.6	7.4	8.1	8.1
20	8.1	8.0	7.7	7.5	7.8	7.4	---	---	7.7	7.5	---	---
21	8.1	7.9	7.8	7.6	7.5	7.2	---	---	7.7	7.5	---	---
22	8.1	7.9	7.8	7.7	7.5	7.2	---	---	7.7	7.5	---	---
23	8.0	7.8	7.8	7.6	7.5	7.2	---	---	7.7	7.5	---	---
24	7.9	7.7	7.8	7.6	7.5	7.2	7.7	7.4	7.7	7.5	---	---
25	7.7	7.5	7.7	7.5	7.4	7.2	7.7	7.4	7.7	7.5	---	---
26	7.6	7.5	7.6	7.5	7.3	7.2	7.7	7.4	7.7	7.4	---	---
27	7.6	7.5	7.5	7.4	7.3	7.2	7.6	7.4	---	---	---	---
28	7.5	7.4	7.5	7.4	7.4	7.2	7.5	7.4	---	---	---	---
29	7.5	7.4	7.5	7.3	7.3	7.2	7.5	7.4	---	---	---	---
30	7.5	7.4	7.5	7.3	7.5	7.2	7.6	7.4	---	---	---	---
31	---	---	7.8	7.4	---	---	7.6	7.4	---	---	---	---
MONTH	---	---	8.0	7.3	8.2	7.2	---	---	---	---	---	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	9.0	6.0	7.5	20.0	17.0	18.5	22.0	20.0	21.5
2	---	---	---	9.0	5.5	7.5	21.5	18.0	19.5	21.5	18.5	20.0
3	---	---	---	10.0	7.0	8.5	20.5	18.5	19.5	20.0	17.5	18.5
4	---	---	---	9.0	8.0	8.0	21.5	18.0	19.5	20.5	15.5	18.0
5	---	---	---	10.5	7.0	9.0	21.0	19.0	20.0	22.0	17.0	19.5
6	14.5	14.0	14.5	11.5	9.0	10.0	22.5	19.0	20.5	23.5	19.5	21.5
7	13.5	12.0	13.0	10.0	8.5	9.0	23.0	20.0	21.5	25.5	21.5	23.5
8	12.0	11.0	11.5	10.0	7.0	8.5	22.0	19.0	20.5	26.5	22.5	24.5
9	10.5	9.5	10.5	13.0	8.5	11.0	19.0	17.0	18.0	27.0	22.5	25.0
10	9.5	6.0	8.0	14.5	12.0	13.5	19.0	14.5	17.0	26.5	22.0	24.5
11	6.0	4.0	5.5	15.5	12.5	14.5	18.5	15.0	16.5	24.5	23.0	24.0
12	5.5	3.0	4.5	16.5	14.0	15.0	19.5	15.5	17.5	25.0	22.0	23.5
13	5.5	3.0	4.0	15.5	15.0	15.0	21.0	17.0	19.0	25.5	22.0	23.5
14	5.0	3.5	4.5	15.0	14.0	14.5	20.0	18.0	19.0	26.5	23.0	24.5
15	5.5	3.0	4.5	15.0	14.0	14.5	19.5	17.0	18.5	26.0	23.5	24.5
16	8.5	5.5	7.0	15.0	13.5	14.0	18.0	14.5	16.0	26.0	23.0	24.5
17	11.5	9.0	10.5	15.0	12.5	14.0	15.0	13.5	14.0	27.0	23.0	25.0
18	12.5	11.0	11.5	15.0	13.5	14.0	17.5	13.0	15.5	25.0	22.5	24.0
19	14.5	12.0	13.5	15.5	14.5	15.0	18.0	15.5	17.0	22.5	20.0	21.5
20	14.5	13.0	13.5	14.0	11.5	13.0	17.5	16.5	17.0	20.5	19.0	19.5
21	14.0	12.0	13.0	12.0	9.0	10.5	16.5	15.0	15.5	20.0	17.0	18.5
22	12.0	9.5	10.5	11.5	8.5	9.5	16.5	13.5	15.5	21.0	16.5	18.5
23	11.0	8.5	9.5	13.0	8.5	10.5	16.5	13.0	15.0	21.5	18.5	20.0
24	10.0	8.5	9.5	15.0	10.5	12.5	18.0	13.5	16.0	23.0	20.0	21.5
25	10.5	8.0	9.0	17.0	11.5	14.5	21.0	16.5	19.0	22.0	20.5	21.0
26	11.5	8.5	10.0	17.5	13.5	15.5	23.5	19.0	21.0	22.0	21.5	21.5
27	10.5	9.5	10.5	18.5	14.5	16.5	24.0	20.5	22.5	22.5	21.0	22.0
28	10.0	8.0	9.0	18.0	13.5	16.0	23.0	20.5	22.0	22.0	20.0	21.0
29	---	---	---	18.5	14.0	16.5	22.5	19.0	21.0	21.0	20.0	20.5
30	---	---	---	19.5	15.0	17.5	23.5	19.5	21.5	---	---	---
31	---	---	---	20.0	16.0	18.0	---	---	---	---	---	---
MONTH	---	---	---	20.0	5.5	12.5	24.0	13.0	18.5	27.0	15.5	22.0

## CUMBERLAND RIVER BASIN

03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	28.5	26.5	27.5	31.5	27.5	29.5	---	---	---
2	---	---	---	27.5	24.5	26.0	29.0	26.5	28.0	---	---	---
3	---	---	---	26.0	23.0	24.5	29.0	24.5	26.5	---	---	---
4	---	---	---	26.5	23.5	25.0	28.5	24.0	26.5	---	---	---
5	22.5	14.0	18.5	27.0	24.5	26.0	29.0	24.0	26.5	---	---	---
6	22.5	21.0	21.5	28.5	25.5	27.0	26.5	24.5	25.5	---	---	---
7	23.0	21.0	21.5	29.0	26.0	27.5	28.0	24.0	27.0	---	---	---
8	23.5	21.5	22.5	30.0	26.5	28.5	28.0	24.5	26.5	---	---	---
9	23.5	22.0	22.5	29.0	27.5	28.5	27.5	25.5	26.5	---	---	---
10	23.0	21.5	22.0	30.0	26.5	28.5	28.5	25.0	27.0	---	---	---
11	24.0	21.5	22.5	29.5	27.5	28.5	29.0	26.0	27.0	23.0	22.5	23.0
12	25.0	22.0	23.0	30.0	27.0	28.5	27.0	26.0	26.5	23.0	22.0	22.5
13	24.0	21.5	23.0	29.5	27.0	28.0	28.0	25.0	26.5	23.0	20.5	21.5
14	24.0	21.5	23.0	28.5	26.5	27.5	28.5	25.5	27.0	23.0	20.5	21.5
15	25.0	23.0	24.0	29.0	26.5	28.0	28.5	25.5	27.0	23.5	21.0	22.0
16	26.0	23.0	24.5	31.5	27.5	29.5	27.0	25.5	26.0	24.5	21.5	23.0
17	27.0	24.0	25.5	30.5	28.5	29.5	27.0	24.5	25.5	24.0	22.0	23.0
18	26.0	23.0	24.5	31.0	27.5	29.5	28.0	25.0	26.5	23.5	22.0	22.5
19	26.5	22.5	24.5	31.0	28.5	29.5	28.5	25.0	27.0	23.5	22.0	22.5
20	27.0	24.0	26.5	31.5	28.5	30.0	28.5	25.0	27.0	---	---	---
21	27.5	24.5	26.0	31.5	28.5	30.0	28.5	26.0	27.5	---	---	---
22	28.0	25.5	27.0	30.5	28.0	29.5	30.0	26.0	28.0	---	---	---
23	29.0	26.0	27.5	29.0	27.5	28.0	29.5	26.5	28.0	---	---	---
24	28.5	26.0	27.0	32.0	29.5	31.0	29.0	26.5	27.5	---	---	---
25	28.0	25.5	26.5	31.5	28.5	30.0	29.0	24.5	27.5	---	---	---
26	27.5	24.5	26.0	32.5	28.0	30.0	28.5	25.5	26.5	---	---	---
27	29.0	25.5	27.0	32.0	28.0	30.0	---	---	---	---	---	---
28	27.5	26.0	27.0	31.5	28.0	29.5	---	---	---	---	---	---
29	27.0	25.5	26.5	31.5	28.0	29.5	---	---	---	---	---	---
30	28.5	25.5	27.0	31.5	27.5	29.5	---	---	---	---	---	---
31	---	---	---	30.5	27.5	29.0	---	---	---	---	---	---
MONTH	29.0	14.0	24.5	32.5	23.0	28.5	---	---	---	---	---	---

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	13.9	10.2	11.7	---	---	---	5.5	4.2	4.7
2	---	---	---	14.3	10.4	12.0	---	---	---	6.7	4.3	5.5
3	---	---	---	14.4	10.2	12.1	---	---	---	7.6	5.5	6.5
4	---	---	---	12.8	10.1	11.3	---	---	---	8.4	6.4	7.4
5	---	---	---	14.4	10.2	12.3	---	---	---	8.6	6.6	7.5
6	7.3	6.9	7.0	14.5	10.2	12.2	---	---	---	7.8	6.0	6.8
7	8.2	7.0	7.6	14.5	10.3	12.2	---	---	---	7.2	5.3	6.2
8	9.7	7.8	8.5	14.5	10.5	12.4	---	---	---	7.6	4.2	5.9
9	10.5	8.1	9.0	14.2	10.4	12.1	---	---	---	7.5	4.2	5.8
10	10.1	8.7	9.4	12.6	9.6	11.0	---	---	---	8.2	4.2	6.2
11	13.6	9.7	11.6	12.7	8.5	11.6	---	---	---	9.3	4.6	6.7
12	---	---	---	13.1	9.9	11.2	---	---	---	10.7	5.1	7.3
13	---	---	---	11.2	9.0	10.4	---	---	---	8.2	4.4	6.4
14	12.3	10.4	11.5	12.3	10.9	11.4	---	---	---	8.9	5.1	7.1
15	12.2	10.3	11.5	11.2	9.3	10.4	---	---	---	8.8	5.1	6.8
16	11.2	9.9	10.8	10.6	9.2	9.9	---	---	---	8.4	4.9	6.6
17	10.0	8.8	9.2	12.6	8.7	11.3	---	---	---	8.3	4.6	6.3
18	8.8	7.3	7.9	12.8	10.2	11.8	11.4	8.9	10.3	7.0	5.0	5.9
19	8.6	7.6	8.2	11.8	8.2	9.4	10.1	7.1	8.5	5.8	4.5	5.0
20	9.4	7.6	9.1	12.9	9.6	11.8	8.3	5.3	7.2	8.2	4.7	6.5
21	9.4	9.0	9.2	14.1	11.7	12.2	8.3	6.0	7.2	9.3	6.6	8.2
22	10.0	9.4	9.7	14.0	11.1	12.2	9.9	6.7	8.3	10.4	7.3	7.9
23	11.1	9.7	10.3	14.0	11.8	13.5	10.0	7.2	8.6	10.7	7.4	8.8
24	10.4	9.7	10.0	13.7	12.6	13.3	9.7	6.9	8.4	9.8	6.8	8.0
25	11.8	9.9	10.6	13.4	12.0	12.9	9.3	6.4	7.8	8.5	5.8	6.9
26	12.0	9.8	10.6	13.2	11.5	12.7	8.4	5.6	7.0	7.4	6.1	6.7
27	11.1	9.4	10.1	12.9	12.5	12.8	8.0	4.9	6.5	7.6	5.5	6.5
28	13.2	9.7	11.1	14.1	12.5	12.5	6.5	4.3	5.3	7.7	5.5	6.6
29	---	---	---	---	---	---	6.6	4.4	5.5	9.0	6.5	7.7
30	---	---	---	---	---	---	6.4	4.5	5.5	8.7	7.4	7.9
31	---	---	---	---	---	---	---	---	---	8.0	7.3	7.6
MONTH	---	---	---	14.5	8.2	11.8	---	---	---	10.7	4.2	6.8



## CUMBERLAND RIVER BASIN

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03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.3	7.2	7.6	7.5	5.1	6.2	8.7	3.6	5.5	---	---	---
2	7.7	7.5	7.6	6.3	5.1	5.6	---	---	---	---	---	---
3	---	---	---	7.1	4.9	5.9	---	---	---	---	---	---
4	---	---	---	7.5	5.1	6.3	---	---	---	---	---	---
5	7.7	7.0	7.5	7.7	5.3	6.5	---	---	---	---	---	---
6	7.5	6.9	7.2	7.6	5.6	6.7	---	---	---	---	---	---
7	8.2	7.0	7.4	7.9	5.5	6.7	8.4	6.3	7.3	---	---	---
8	8.6	6.9	7.6	7.8	5.5	6.6	8.4	5.8	6.9	---	---	---
9	8.4	6.8	7.4	6.4	5.1	5.7	8.3	5.5	6.7	---	---	---
10	7.7	6.7	7.1	6.7	4.7	5.7	7.8	5.4	6.3	---	---	---
11	8.8	6.7	7.5	6.4	4.9	5.6	7.5	5.2	6.3	9.2	7.2	8.4
12	9.5	6.6	7.7	6.5	4.7	5.5	7.2	5.8	6.5	8.6	6.6	7.5
13	10.2	6.5	8.0	7.0	5.0	6.0	9.1	5.0	6.7	10.2	7.1	8.2
14	10.7	6.6	8.2	6.7	5.1	5.8	7.0	4.7	5.9	10.8	7.0	8.4
15	11.4	6.3	8.5	7.1	5.1	6.1	6.4	3.8	5.2	10.8	6.8	8.4
16	11.0	6.2	8.2	7.3	5.4	6.4	5.3	3.9	4.5	11.4	6.5	8.5
17	10.3	5.8	7.6	8.0	5.3	6.7	5.4	3.9	4.5	10.7	6.4	8.2
18	9.7	5.6	7.3	9.7	5.4	7.4	7.4	4.0	5.5	9.1	6.3	7.5
19	9.7	5.6	7.3	11.2	5.6	8.0	7.5	4.8	6.0	9.1	6.3	7.1
20	9.7	5.2	8.4	10.7	5.8	7.9	8.4	5.1	6.5	---	---	---
21	8.5	5.1	6.7	10.5	5.5	7.8	7.3	5.2	6.2	---	---	---
22	8.0	4.9	6.4	10.8	5.5	7.7	7.4	5.0	6.1	---	---	---
23	7.8	4.8	6.3	6.8	4.8	6.0	7.1	4.9	5.8	---	---	---
24	7.8	4.8	6.1	11.6	5.4	8.6	7.3	4.8	5.8	---	---	---
25	6.9	4.7	5.8	10.0	3.9	6.1	8.0	4.9	6.1	---	---	---
26	6.9	5.0	5.9	8.7	3.0	5.3	6.7	4.8	5.6	---	---	---
27	6.8	5.0	5.9	8.3	2.8	5.0	---	---	---	---	---	---
28	6.7	4.9	5.6	8.0	2.8	5.0	---	---	---	---	---	---
29	6.4	4.7	5.5	6.7	3.4	4.8	---	---	---	---	---	---
30	7.6	4.9	6.2	8.6	3.3	5.5	---	---	---	---	---	---
31	---	---	---	8.3	3.5	5.5	---	---	---	---	---	---
MONTH	11.4	4.7	7.1	11.6	2.8	6.3	---	---	---	---	---	---

## CUMBERLAND RIVER BASIN

03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN

LOCATION.--Lat 35°56'25", long 86°27'54", Rutherford County, Hydrologic Unit 05130203, near left bank at county bridge on Sulphur Springs Road, 400 ft upstream from Nice's Mill dam, 1.6 mi downstream from Overall Creek, 4.2 mi southeast of Smyrna, and at mile 6.4.

DRAINAGE AREA.--237 mi<sup>2</sup>, includes 43 mi<sup>2</sup> without surface drainage.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 500.00 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 21, 1986, at site on right bank, 40 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. U. S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--21 years, 431 ft<sup>3</sup>/s, 24.70 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,800 ft<sup>3</sup>/s, Mar. 13, 1975, gage height, 19.18 ft from rating curve extended above 14,000 ft<sup>3</sup>/s on basis of area-velocity study at gage height 17.11 ft and flood routing from Murfreesboro gage and Overall Creek at gage heights 16.65 ft and 17.39 ft; no flow Aug. 9, 10, Sept. 12, 13, 1983, result of upstream regulation and diversion; minimum natural discharge, 2.2 ft<sup>3</sup>/s, Nov. 6-8, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Sept. 4	2030	*20,900	*15.97	No other peak greater than base discharge.			

Minimum discharge, 17 ft<sup>3</sup>/s Aug. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	57	35	159	38	40	197	172	31	335	37	21	48	
2	194	35	266	55	55	179	156	30	269	116	20	78	
3	117	37	190	66	284	166	145	26	250	127	18	117	
4	81	48	147	63	228	152	129	26	842	70	17	12200	
5	65	46	124	58	449	140	119	26	392	49	19	7090	
6	52	38	110	55	477	130	105	26	527	39	27	1340	
7	47	35	97	53	427	119	110	25	559	34	36	851	
8	41	35	87	50	315	108	161	25	447	32	38	615	
9	37	34	78	47	247	102	276	24	600	29	36	484	
10	36	31	72	47	212	96	216	24	565	29	29	411	
11	34	31	68	44	197	92	167	21	398	30	31	357	
12	32	25	69	44	172	106	136	21	318	27	37	413	
13	26	25	75	43	160	3750	121	31	269	28	30	363	
14	28	31	75	44	406	1300	109	31	233	39	26	302	
15	39	30	83	43	1530	1320	96	32	204	40	24	265	
16	42	33	77	41	684	943	82	31	177	31	25	234	
17	38	54	71	41	1610	699	68	29	152	28	32	205	
18	36	104	63	37	3690	563	62	29	132	26	45	178	
19	31	115	57	47	1370	621	57	35	110	24	36	194	
20	29	85	52	49	881	532	54	39	94	23	31	260	
21	28	65	50	68	632	434	64	33	72	23	29	207	
22	27	59	48	61	499	382	60	31	63	23	27	167	
23	29	52	47	56	412	346	50	29	53	22	24	147	
24	29	48	44	52	353	318	48	31	56	21	23	127	
25	30	45	42	49	312	294	45	45	48	20	22	111	
26	29	41	40	46	274	274	40	54	41	20	24	95	
27	23	59	38	44	245	258	36	57	35	19	59	87	
28	21	261	37	44	218	244	34	1580	33	19	75	73	
29	25	283	35	43	---	229	34	2260	32	21	51	65	
30	23	191	34	41	---	218	33	674	35	23	43	57	
31	27	---	37	41	---	195	---	445	---	21	34	---	
TOTAL	1353	2011	2472	1510	16379	14507	2985	5801	7341	1090	989	27141	
MEAN	43.6	67.0	79.7	48.7	585	468	99.5	187	245	35.2	31.9	905	
MAX	194	283	266	68	3690	3750	276	2260	842	127	75	12200	
MIN	21	25	34	37	40	92	33	21	32	19	17	48	
CFSM	.18	.28	.34	.21	2.47	1.97	.42	.79	1.03	.15	.13	3.82	
IN.	.21	.32	.39	.24	2.57	2.28	.47	.91	1.15	.17	.16	4.26	
CAL YR 1985	TOTAL	62725.9		MEAN	172	MAX	3240	MIN	5.2	CFSM	.73	IN.	9.85
WTR YR 1986	TOTAL	83579		MEAN	229	MAX	12200	MIN	17	CFSM	.97	IN.	13.12

## CUMBERLAND RIVER BASIN

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03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to current year.

WATER TEMPERATURE: March 1974 to current year.

INSTRUMENTATION.--Water-temperature recorder March 1974 to September 1975, water-quality monitor October 1975 to current year.

REMARKS.--Interruptions in the record were due to monitor malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 631 microsiemens, Nov. 18, 1980; minimum, 83 microsiemens, May 19, 1983.

WATER TEMPERATURES: Maximum, 30.0°C, July 12, 1976, Aug. 14, 1985, July 20, 1986; minimum, 0.5°C, Jan. 21, 1985.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 560 microsiemens, Nov. 15; minimum, 236 microsiemens, Mar. 13.

WATER TEMPERATURES: Maximum, 30.0°C, July 20; minimum, 2.0°C, Dec. 26, 27.

## SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	413	396	401	535	522	528	468	459	462	513	505	509
2	418	308	351	535	521	526	477	461	467	522	512	518
3	371	308	339	522	517	519	496	476	486	513	488	500
4	404	372	389	516	509	511	503	493	499	487	483	485
5	422	403	414	512	498	505	492	483	487	482	478	480
6	433	423	428	521	510	514	489	484	486	484	478	481
7	434	421	425	528	519	523	496	489	494	485	478	480
8	438	431	434	536	527	530	501	496	498	495	478	483
9	447	438	445	535	531	533	504	499	502	502	496	500
10	458	449	453	533	529	531	512	504	509	505	501	504
11	467	457	460	531	525	528	517	509	513	508	497	501
12	477	467	473	532	525	528	519	514	516	512	509	510
13	480	476	478	534	528	530	518	514	515	510	502	506
14	477	469	472	555	534	540	515	509	512	511	503	507
15	476	469	473	560	554	557	514	509	511	519	507	511
16	481	475	478	553	539	544	509	506	508	523	518	520
17	479	473	476	538	528	532	515	506	510	522	515	517
18	483	475	477	534	458	497	521	514	517	522	516	518
19	493	483	486	475	454	462	521	518	520	522	518	520
20	500	494	496	488	475	482	519	514	515	521	511	517
21	500	497	498	498	488	493	516	514	515	511	488	497
22	505	498	502	500	497	498	516	510	513	492	485	489
23	---	---	---	511	498	503	517	511	513	488	480	483
24	---	---	---	517	511	515	519	515	517	500	479	492
25	---	---	---	524	513	518	520	517	518	493	488	491
26	---	---	---	529	525	527	522	516	519	492	490	491
27	---	---	---	526	515	522	523	520	521	503	491	497
28	---	---	---	516	471	492	521	518	520	506	501	503
29	---	---	---	495	475	488	521	519	520	508	504	506
30	---	---	---	492	469	482	526	521	524	520	502	510
31	518	514	516	---	---	---	522	513	518	525	510	520
MONTH	---	---	---	560	454	515	526	459	507	525	478	501

## CUMBERLAND RIVER BASIN

03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	515	507	511	460	455	457	433	425	430	486	453	469
2	508	486	500	458	452	455	444	428	439	495	487	491
3	487	410	440	458	453	455	448	437	443	---	---	---
4	451	431	440	457	450	453	458	444	452	---	---	---
5	453	410	432	458	452	455	459	449	454	---	---	---
6	435	412	422	455	450	453	466	455	462	---	---	---
7	452	434	444	453	444	449	473	459	466	---	---	---
8	459	452	457	450	444	446	474	446	462	540	528	533
9	461	455	457	449	441	445	446	427	432	535	525	530
10	466	461	463	445	442	444	436	430	433	530	520	527
11	473	465	470	447	441	444	449	436	444	533	526	530
12	486	473	479	449	418	443	455	439	447	531	523	527
13	500	485	494	398	236	295	444	431	437	523	511	515
14	495	356	437	371	299	341	437	425	431	509	489	502
15	372	352	360	395	373	384	440	423	434	490	469	482
16	411	373	393	405	394	398	442	433	439	469	463	465
17	414	315	388	425	405	416	442	436	439	473	462	466
18	315	255	279	435	425	432	447	435	441	474	468	472
19	374	308	347	441	434	438	457	444	451	472	466	468
20	400	375	388	440	437	439	465	458	462	518	474	495
21	412	401	408	437	428	431	461	454	457	542	521	531
22	422	412	418	435	429	431	453	449	450	544	533	538
23	425	422	423	443	435	440	453	449	451	538	527	534
24	432	427	430	448	441	445	458	449	452	540	533	536
25	---	---	---	448	440	445	471	458	465	543	533	537
26	---	---	---	444	434	439	477	472	475	558	544	553
27	459	458	459	444	432	435	481	467	476	554	491	520
28	460	457	459	439	429	433	469	465	467	490	311	429
29	---	---	---	436	422	428	467	452	459	332	277	300
30	---	---	---	431	423	427	454	447	451	375	332	355
31	---	---	---	431	425	429	---	---	---	400	376	388
MONTH	515	255	431	460	236	430	481	423	450	558	277	488
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	413	399	408	448	442	445	---	---	---	---	---	---
2	421	412	416	441	408	432	---	---	---	---	---	---
3	426	421	423	404	370	378	---	---	---	---	---	---
4	425	314	358	401	376	387	---	---	---	---	---	---
5	340	314	324	430	402	415	---	---	---	---	---	---
6	339	310	323	441	429	434	---	---	---	---	---	---
7	376	341	362	452	440	443	---	---	---	---	---	---
8	396	377	387	457	448	452	---	---	---	395	380	392
9	400	349	391	460	450	455	---	---	---	395	387	392
10	382	343	363	468	450	457	---	---	---	391	384	388
11	409	383	398	476	457	467	---	---	---	387	379	383
12	419	409	414	480	466	474	---	---	---	382	362	373
13	423	418	420	482	467	474	---	---	---	399	377	392
14	428	421	423	467	451	459	500	494	497	399	393	395
15	428	422	425	459	439	447	512	499	505	404	395	399
16	434	425	429	439	433	436	526	513	520	414	402	406
17	435	429	432	444	437	440	525	509	517	416	409	412
18	435	431	433	460	444	451	546	521	536	421	417	418
19	438	430	433	473	461	466	530	504	514	---	---	---
20	447	435	439	482	473	477	508	503	506	---	---	---
21	445	438	442	490	475	480	506	499	502	---	---	---
22	443	434	438	520	491	504	521	502	511	---	---	---
23	448	438	442	538	518	528	532	523	526	---	---	---
24	446	437	442	549	538	542	536	531	532	---	---	---
25	449	442	444	552	545	548	534	526	530	426	372	404
26	441	432	435	553	545	550	534	530	532	443	346	403
27	445	435	439	551	541	547	---	---	---	408	356	387
28	448	444	446	---	---	---	---	---	---	422	386	402
29	450	446	448	---	---	---	---	---	---	413	357	388
30	448	444	446	---	---	---	---	---	---	403	373	391
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	450	310	414	553	370	466	---	---	---	---	---	---



## 03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	19.5	17.5	19.0	18.5	17.5	18.0	15.0	14.0	14.5	5.5	4.5	5.0
2	17.5	16.0	16.5	18.0	17.5	18.0	14.0	10.0	12.0	5.5	4.0	5.0
3	17.0	16.5	17.0	17.5	15.5	16.5	10.0	9.0	9.0	6.5	5.5	6.0
4	18.0	16.0	16.5	15.5	14.0	15.0	9.5	8.5	9.0	7.0	6.5	6.5
5	18.0	17.0	17.5	14.0	13.0	13.5	10.0	9.5	10.0	6.5	5.5	6.0
6	17.5	16.0	16.5	14.0	13.0	13.5	10.0	8.5	9.0	5.5	4.5	5.0
7	16.5	15.5	16.0	13.5	12.5	13.5	8.5	7.5	8.0	5.5	4.5	5.0
8	17.0	16.0	16.5	13.0	12.0	12.5	9.5	8.0	8.5	5.0	4.0	4.5
9	17.5	17.0	17.0	13.0	12.0	12.5	10.5	9.5	10.0	4.5	4.0	4.0
10	19.5	17.5	18.0	15.0	13.0	14.0	11.0	9.5	10.5	5.5	4.0	4.5
11	19.5	18.5	19.0	16.0	15.0	15.0	12.5	11.0	11.5	5.5	4.5	5.0
12	20.0	19.5	20.0	17.0	16.0	16.5	12.0	11.0	11.5	6.5	5.0	5.5
13	22.0	20.5	21.0	18.0	16.5	17.5	11.0	9.0	10.5	6.5	5.5	6.0
14	22.0	21.0	21.5	18.5	17.5	18.0	9.0	6.0	7.5	6.0	5.0	5.5
15	22.0	21.5	21.5	19.0	18.0	18.5	6.0	4.5	5.0	6.5	5.0	5.5
16	21.5	21.0	21.5	18.5	17.5	18.5	6.0	5.0	5.5	7.0	5.5	6.0
17	20.5	19.5	20.0	17.5	16.0	16.5	6.5	5.5	6.0	8.5	7.0	7.5
18	21.0	19.5	20.0	17.0	15.5	16.0	7.0	4.5	6.0	10.0	8.0	9.0
19	21.0	20.5	21.0	18.0	16.5	17.0	4.5	3.0	4.0	10.0	9.0	9.5
20	21.0	20.5	21.0	17.5	15.0	16.5	4.0	3.0	3.5	9.0	8.5	9.0
21	21.5	21.0	21.0	15.0	13.0	13.5	4.0	3.0	3.5	9.5	8.0	8.5
22	21.0	20.5	20.5	13.5	13.0	13.5	4.0	3.0	3.5	9.5	9.0	9.0
23	20.5	20.0	20.5	13.5	12.5	13.0	6.0	4.0	5.5	9.0	7.5	8.5
24	20.5	20.0	20.5	13.5	13.0	13.5	6.5	5.5	6.0	8.0	7.0	7.5
25	20.5	20.0	20.5	15.5	14.0	14.5	5.5	3.5	4.5	7.5	7.0	7.5
26	20.0	19.0	19.5	17.0	15.5	16.0	3.5	2.0	3.0	7.5	6.0	7.0
27	19.5	19.0	19.0	17.5	17.0	17.0	3.5	2.0	3.0	6.0	3.0	4.5
28	19.0	18.5	19.0	17.5	15.5	17.0	4.0	3.0	3.5	3.5	2.5	3.0
29	19.0	18.0	18.5	15.5	15.0	15.0	4.5	3.5	4.0	4.0	2.5	3.5
30	18.0	18.0	18.0	15.5	15.0	15.0	4.0	3.5	3.5	5.5	4.0	4.5
31	17.5	17.5	17.5	---	---	---	4.5	3.5	4.0	6.0	4.0	5.5
MONTH	22.0	15.5	19.0	19.0	12.0	15.5	15.0	2.0	7.0	10.0	2.5	6.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	8.0	6.0	7.0	9.5	8.5	9.0	18.5	16.5	17.5	20.5	19.0	19.5
2	9.0	8.0	8.5	10.0	8.0	9.0	19.5	17.0	18.0	19.5	18.0	18.5
3	11.0	8.5	9.5	11.0	9.0	10.0	19.0	17.5	18.0	---	---	---
4	12.5	11.0	11.5	10.5	9.5	9.5	19.0	17.5	18.5	---	---	---
5	13.0	12.5	12.5	11.0	8.5	10.0	19.0	18.0	18.5	---	---	---
6	12.5	11.5	12.0	12.0	10.0	11.0	20.0	18.0	19.0	---	---	---
7	11.5	10.0	10.5	11.5	10.0	10.5	20.5	18.5	19.5	---	---	---
8	10.5	9.5	10.0	10.5	8.5	9.5	20.0	19.0	19.5	23.5	21.5	22.5
9	9.5	8.0	9.0	13.0	9.5	11.0	19.0	17.0	18.0	23.5	22.0	23.0
10	8.0	5.0	6.0	14.5	12.5	13.5	17.5	15.5	16.5	24.5	22.0	23.0
11	5.0	4.0	4.5	15.0	13.5	14.0	18.0	15.0	16.5	23.0	21.5	22.5
12	5.0	4.0	4.5	16.0	14.0	15.0	18.5	15.5	17.0	23.0	21.0	22.0
13	5.0	4.5	5.0	15.5	14.5	15.0	19.5	17.0	18.0	23.5	21.0	22.0
14	5.0	3.5	4.5	15.0	14.0	14.5	19.0	17.5	18.5	24.5	22.0	23.5
15	6.0	3.5	5.5	15.0	14.0	14.5	18.5	17.5	18.0	23.5	22.5	23.0
16	9.0	6.0	8.0	14.5	13.0	14.0	17.5	15.0	16.0	24.5	22.0	23.0
17	10.5	9.0	10.0	14.5	12.5	13.5	14.5	13.5	14.0	25.0	22.5	23.5
18	11.5	10.5	11.0	15.0	13.5	14.0	16.5	13.5	15.0	23.5	22.0	22.5
19	14.5	11.5	13.0	15.5	14.0	15.0	17.0	15.0	16.0	21.5	20.0	21.0
20	14.5	13.0	14.0	14.0	12.0	13.0	17.0	16.0	16.5	20.0	19.0	19.5
21	14.0	12.5	13.5	11.5	10.0	11.0	16.5	15.5	16.0	19.5	18.5	19.0
22	12.5	11.0	12.0	12.0	9.0	10.5	16.0	15.0	15.5	19.5	18.0	19.0
23	11.5	10.0	11.0	13.0	10.0	11.5	16.0	14.5	15.5	20.5	19.0	19.5
24	11.5	10.5	11.0	14.5	11.5	13.0	17.5	14.5	16.0	20.5	20.0	20.5
25	---	---	---	15.5	13.0	14.5	20.0	16.0	17.5	21.5	20.5	20.5
26	---	---	---	16.0	14.5	15.0	20.5	17.5	19.0	21.5	21.0	21.0
27	11.5	10.5	11.0	17.0	15.0	16.0	21.0	18.5	20.0	21.5	20.5	21.0
28	10.5	9.5	10.0	16.5	14.0	15.5	20.0	19.0	19.5	21.5	18.0	20.0
29	---	---	---	17.5	14.0	15.5	20.5	18.5	19.5	20.5	19.5	20.0
30	---	---	---	18.0	15.0	16.5	21.5	18.5	20.0	21.0	19.5	20.0
31	---	---	---	18.5	16.0	17.0	---	---	---	21.0	20.0	20.5
MONTH	14.5	3.5	9.5	18.5	8.0	13.0	21.5	13.5	17.5	25.0	18.0	21.0

## CUMBERLAND RIVER BASIN

03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	22.0	20.5	21.5	26.0	24.0	25.0	---	---	---	---	---	---
2	23.5	21.5	22.0	26.0	23.5	25.0	---	---	---	---	---	---
3	23.0	21.5	22.5	25.5	23.5	24.5	---	---	---	---	---	---
4	23.5	21.5	22.0	25.0	22.5	23.5	---	---	---	---	---	---
5	22.0	21.0	21.5	25.5	23.0	24.0	---	---	---	21.5	21.0	21.5
6	22.0	21.0	21.5	26.0	23.5	24.5	---	---	---	20.5	19.0	20.0
7	21.5	20.0	20.5	26.5	24.0	25.0	---	---	---	20.0	19.0	19.5
8	21.5	20.5	21.0	27.0	24.5	25.5	---	---	---	19.5	18.5	19.0
9	22.5	21.0	21.5	26.5	24.5	25.5	---	---	---	20.0	18.0	19.0
10	22.0	20.5	21.0	27.0	24.5	25.5	---	---	---	21.0	19.5	20.0
11	22.0	20.5	21.0	27.0	24.5	25.5	---	---	---	21.5	20.5	21.0
12	22.5	21.0	21.5	27.0	24.5	26.0	---	---	---	22.0	21.0	21.5
13	22.5	21.0	21.5	26.0	24.5	25.0	---	---	---	21.5	19.5	20.5
14	22.5	20.5	21.5	26.5	23.5	25.0	25.5	24.5	25.0	21.5	19.5	20.5
15	23.0	21.0	22.0	26.5	24.0	25.0	26.0	24.0	25.0	21.5	20.5	21.0
16	23.5	21.0	22.5	27.5	24.5	26.0	25.5	24.0	24.5	22.5	20.5	21.5
17	24.0	21.5	22.5	27.0	25.5	26.0	24.5	23.0	23.5	22.0	21.0	21.5
18	23.5	21.5	22.5	28.5	25.5	26.5	25.0	23.5	24.5	22.0	21.0	21.5
19	24.0	21.0	22.5	28.5	26.0	27.0	25.5	23.5	24.5	---	---	---
20	24.5	22.0	23.0	30.0	26.0	27.5	25.5	23.5	24.5	---	---	---
21	25.0	22.5	23.5	28.5	26.0	27.0	25.5	24.0	24.5	---	---	---
22	25.5	23.0	24.0	28.0	26.0	27.0	25.5	24.0	24.5	---	---	---
23	25.5	23.0	24.0	29.0	26.0	27.5	25.5	24.0	25.0	---	---	---
24	26.0	23.5	24.5	29.5	26.0	27.5	25.0	24.5	25.0	21.5	19.0	20.5
25	26.0	24.0	24.5	28.5	26.5	27.5	25.5	23.5	24.5	21.5	18.5	20.5
26	25.5	22.5	24.0	28.5	26.0	27.0	26.0	24.5	25.0	22.0	17.5	20.0
27	26.0	23.0	24.5	28.5	26.0	27.0	---	---	---	20.5	18.0	19.5
28	25.5	24.0	24.5	---	---	---	---	---	---	21.0	19.0	20.0
29	24.5	23.5	24.0	---	---	---	---	---	---	20.5	18.0	19.5
30	25.5	23.0	24.0	---	---	---	---	---	---	20.5	18.5	19.5
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	26.0	20.0	22.5	30.0	22.5	26.0	---	---	---	---	---	---

## CUMBERLAND RIVER BASIN

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## 03431517 CUMMINGS BRANCH AT LICKTON, TN

LOCATION.--Lat 36°18'25", long 86°48'00", Davidson County, Hydrologic Unit 05130202, on right downstream wing-wall of bridge, on Shaw Road, 900 ft above confluence with Shaw Branch, 0.8 mi northeast of Lickton, and at mile 0.2.

DRAINAGE AREA.--2.40 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1975 to April 1985, August 1985 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and V-notch wier. Datum of gage is 532.25 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1 to Nov. 25, Jan. 23-30, May 27 to June 1, 6-11, Sept. 23-30. Records good, except those below 1.0 ft<sup>3</sup>/s, which are fair, and periods of fragmentary gage-height record, Oct. 1 to Nov. 25, Jan. 23-30, May 27 to June 1, 6-11, Sept. 23-30, which are poor. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--9 years (water years 1977-84, 1986), 3.15 ft<sup>3</sup>/s, 17.82 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 881 ft<sup>3</sup>/s, Sept. 13, 1979; gage height, 5.21 ft; no flow many days, 1980, 1983, 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
June 9	Unknown	*120	*3.19	No other peak greater than base discharge.			

Minimum daily discharge, .01 ft<sup>3</sup>/s Aug. 4-6, Sept. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	.20	3.5	2.9	.47	.48	1.9	1.5	.43	1.7	.36	.02	.02	
2	.18	2.1	2.8	.44	3.0	1.8	1.4	.42	1.4	.30	.02	.02	
3	.16	3.2	2.4	.46	8.7	1.7	1.4	.39	1.3	.25	.02	.02	
4	.15	2.1	2.0	.46	7.3	1.6	1.3	.37	1.8	.21	.01	.26	
5	.14	1.4	1.6	.45	7.6	1.5	1.2	.36	2.1	.18	.01	.21	
6	.13	1.0	1.3	.39	8.8	1.4	1.1	.36	2.8	.17	.01	.06	
7	.13	.90	1.1	.36	11	1.3	1.1	.31	10	.16	.03	.03	
8	.13	.75	.95	.36	8.5	1.2	1.1	.30	24	.15	.05	.02	
9	.13	.62	.80	.35	6.0	1.1	.99	.29	30	.14	.04	.01	
10	.13	.47	.69	.34	5.2	1.1	.93	.28	15	.13	.04	.01	
11	.12	.60	.88	.34	4.4	1.1	.88	.28	10	.12	.04	.13	
12	.11	.46	1.3	.34	3.4	4.1	.85	.28	7.8	.11	.04	.25	
13	.15	.38	1.4	.34	2.7	15	.81	.27	4.6	.10	.03	.09	
14	.47	.34	1.5	.34	2.6	9.7	.78	.26	4.0	.13	.03	.06	
15	.34	.31	1.4	.34	2.7	6.7	.73	.24	2.8	.14	.03	.04	
16	.25	1.5	1.2	.34	3.6	5.2	.70	.22	2.3	.12	.06	.04	
17	.17	1.1	1.1	.34	10	4.4	.67	.20	1.8	.10	.06	.05	
18	.16	.90	1.0	.42	15	4.6	.64	.22	1.4	.09	.05	.11	
19	.15	.70	.84	1.6	11	7.8	.64	.57	1.2	.09	.04	.21	
20	.15	.60	.80	1.4	8.4	6.3	.84	.46	.94	.07	.04	.13	
21	.20	.54	.71	1.1	6.1	5.0	1.1	.32	.75	.06	.03	.10	
22	.16	.46	.67	.90	4.8	4.1	.98	.28	.63	.06	.03	.09	
23	.50	.40	.67	.80	4.2	3.4	.75	.26	.57	.05	.03	.07	
24	.63	.45	.67	.70	3.5	2.8	.67	.47	.53	.05	.03	.06	
25	.45	.60	.63	.60	2.9	2.5	.63	.78	.43	.04	.03	.05	
26	.35	.55	.53	.52	2.6	2.3	.59	1.2	.38	.04	.03	.06	
27	.30	5.1	.55	.47	2.5	2.1	.57	1.8	.34	.04	.02	.06	
28	.26	7.8	.55	.44	2.2	1.8	.51	4.5	.32	.03	.02	.05	
29	.45	5.5	.52	.45	---	1.8	.48	3.1	.36	.03	.02	.04	
30	1.5	3.5	.50	.47	---	1.6	.45	2.4	.31	.03	.02	.04	
31	2.0	---	.49	.49	---	1.6	---	2.0	---	.02	.02	---	
TOTAL	10.35	47.83	34.45	16.82	159.18	108.5	26.29	23.62	131.56	3.57	.95	2.39	
MEAN	.33	1.59	1.11	.54	5.68	3.50	.88	.76	4.39	.12	.03	.08	
MAX	2.0	7.8	2.9	1.6	15	15	1.5	4.5	30	.36	.06	.26	
MIN	.11	.31	.49	.34	.48	1.1	.45	.20	.31	.02	.01	.01	
CFSM	.14	.66	.46	.22	2.37	1.46	.37	.32	1.83	.05	.01	.03	
IN.	.16	.74	.53	.26	2.47	1.68	.41	.37	2.04	.06	.01	.04	
WTR YR 1986	TOTAL	565.51		MEAN	1.55	MAX	30	MIN	.01	CFSM	.65	IN.	8.77

## CUMBERLAND RIVER BASIN

03431700 RICHLAND CREEK AT CHARLOTTE AVENUE, AT NASHVILLE, TN

LOCATION.--Lat 36°09'04", long 86°51'16", Davidson County, Hydrologic Unit 05130202, near left bank on downstream end of pier of Charlotte Avenue bridge on U. S. Highway 70, 3.7 mi upstream from mouth, 4.0 mi southwest of the State Capitol in Nashville, and at mile 3.6.

DRAINAGE AREA.--24.3 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1964 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 409.56 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-8, Jan. 25-30. Records good, except those below 5.0 ft<sup>3</sup>/s which are fair, and periods of no gage-height record Oct. 1-8 and Jan. 25-30, which are poor. Diversions above station used for irrigation of golf courses and water supply. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--22 years, 33.8 ft<sup>3</sup>/s, 18.89 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,470 fts<sup>3</sup>/s, Sept. 13, 1979, gage height, 15.13 ft; minimum, 0.05 ft<sup>3</sup>/s, Oct. 7-9, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Sept. 4	1645	*1,640	*6.49	No other peak greater than base discharge.			

Minimum daily discharge, 1.3 fts<sup>3</sup>/s, May 16, 17, July 23-25, Aug. 2-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	4.5	43	60	4.5	3.2	11	8.9	3.4	19	2.3	1.4	4.9	
2	4.0	25	42	4.5	138	10	8.5	3.2	21	5.6	1.3	16	
3	3.5	42	31	4.5	102	9.3	8.4	3.0	16	2.7	1.3	34	
4	3.0	26	24	4.3	51	9.0	7.2	3.0	11	2.3	1.3	204	
5	2.8	17	20	4.1	44	9.0	6.1	2.5	22	2.1	1.3	57	
6	2.8	12	16	3.6	99	9.4	6.0	2.4	22	2.0	4.3	25	
7	2.8	12	13	3.5	68	8.7	5.7	2.0	74	1.8	2.2	16	
8	2.7	8.7	11	3.5	45	6.9	9.5	1.9	177	1.6	2.5	12	
9	2.7	7.2	9.3	3.5	34	6.4	6.3	1.8	186	1.6	2.2	8.8	
10	2.7	5.9	8.3	3.5	29	6.0	6.0	1.6	94	1.6	4.1	6.7	
11	2.5	8.2	11	3.3	22	5.6	6.0	1.5	54	1.5	23	7.6	
12	2.3	5.9	11	3.2	19	85	5.3	1.5	35	1.5	4.3	13	
13	2.4	4.8	22	3.2	17	128	5.2	1.5	25	1.5	2.8	6.1	
14	8.6	4.2	16	3.2	61	56	4.7	1.4	19	1.5	2.3	5.0	
15	6.0	3.8	14	3.1	58	39	4.5	1.4	15	1.6	2.0	4.2	
16	3.8	20	12	2.9	73	30	4.5	1.3	12	1.6	131	3.8	
17	2.8	14	10	3.3	146	23	4.5	1.3	9.0	1.5	24	3.3	
18	2.8	12	9.4	4.2	120	43	4.3	116	8.0	1.6	12	3.6	
19	2.5	8.9	8.6	12	73	62	4.2	36	6.1	1.6	8.0	11	
20	2.5	7.7	7.9	5.1	51	37	8.3	13	5.5	1.6	6.1	4.5	
21	3.4	6.7	7.6	4.6	40	29	8.2	7.5	4.9	1.4	5.3	3.2	
22	2.6	5.9	7.4	4.5	32	23	6.0	5.2	4.5	1.4	4.3	2.8	
23	6.9	5.2	7.2	4.2	26	21	5.2	4.9	4.8	1.3	4.0	2.6	
24	8.1	5.7	6.9	3.7	22	18	4.6	58	8.9	1.3	3.9	2.5	
25	4.8	7.6	6.4	3.4	20	16	4.5	32	6.9	1.3	3.5	2.4	
26	4.2	6.9	5.8	3.3	18	14	4.4	27	3.6	1.9	16	3.1	
27	3.6	278	5.2	3.2	15	13	4.3	30	3.0	8.3	9.2	2.5	
28	3.2	144	4.9	3.2	13	11	4.2	166	2.7	1.9	5.1	2.2	
29	3.2	64	4.9	3.2	---	10	3.8	75	2.4	1.5	3.7	2.1	
30	18	42	4.7	3.2	---	9.1	3.4	48	2.3	1.4	3.1	2.0	
31	25	---	4.5	3.3	---	9.0	---	28	---	1.4	2.9	---	
TOTAL	150.7	854.3	422.0	122.8	1439.2	767.4	172.7	681.3	874.6	62.2	298.4	471.9	
MEAN	4.86	28.5	13.6	3.96	51.4	24.8	5.76	22.0	29.2	2.01	9.63	15.7	
MAX	25	278	60	12	146	128	9.5	166	186	8.3	131	204	
MIN	2.3	3.8	4.5	2.9	3.2	5.6	3.4	1.3	2.3	1.3	1.3	2.0	
CFSM	.20	1.17	.56	.16	2.12	1.02	.24	.91	1.20	.08	.40	.65	
IN.	.23	1.31	.65	.19	2.20	1.17	.26	1.04	1.34	.10	.46	.72	
CAL YR 1985	TOTAL	5952.8		MEAN	16.3	MAX	278	MIN	1.1	CFSM	.67	IN.	9.11
WTR YR 1986	TOTAL	6317.5		MEAN	17.3	MAX	278	MIN	1.3	CFSM	.71	IN.	9.67



## CUMBERLAND RIVER BASIN

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03431800 SYCAMORE CREEK NEAR ASHLAND CITY, TN

LOCATION.--Lat 36°19'12", long 87°03'04", Cheatham County, Hydrologic Unit 05130202, near right bank on downstream end of pier of bridge on State Highway 49, at Sycamore, 3.2 mi north of Ashland City, 4.4 mi upstream from Spring Creek, and at mile 8.6.

DRAINAGE AREA.--97.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 400 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--25 years, 142 ft<sup>3</sup>/s, 19.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,000 ft<sup>3</sup>/s, May 19, 1983, gage height, 13.24 ft; minimum, 7.5 ft<sup>3</sup>/s, Sept. 15, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
June 8	0415	*3,720	*8.70	No other peak greater than base discharge.			
Minimum discharge, 13 ft <sup>3</sup> /s Aug. 26.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	127	221	205	42	38	69	65	32	70	67	16	17	
2	74	187	201	38	157	66	63	32	60	43	15	19	
3	49	157	143	39	529	65	61	30	91	33	15	19	
4	38	147	119	38	271	63	58	30	192	29	15	164	
5	32	106	105	37	190	61	56	30	122	27	15	149	
6	30	84	92	35	411	63	54	30	186	25	18	46	
7	29	72	80	36	481	58	53	30	342	23	29	28	
8	28	61	75	33	248	54	53	29	1610	22	41	23	
9	27	54	69	32	179	52	48	28	396	21	34	20	
10	28	50	64	36	151	52	44	27	445	21	38	19	
11	28	178	77	35	130	50	44	27	208	21	37	21	
12	28	137	117	35	105	273	43	27	148	21	26	199	
13	27	101	110	35	96	1160	42	28	112	20	20	52	
14	33	84	104	34	119	313	41	30	91	25	19	32	
15	65	73	91	33	143	201	39	30	77	36	18	26	
16	38	213	86	32	250	151	37	30	67	27	19	23	
17	31	172	79	34	647	124	37	28	59	22	22	21	
18	30	132	72	38	562	195	37	27	51	21	21	123	
19	30	108	62	119	299	578	36	63	46	20	19	165	
20	32	91	62	86	209	265	45	51	42	19	17	60	
21	47	76	58	68	167	184	66	33	38	17	17	39	
22	42	71	56	60	137	148	61	30	36	17	16	31	
23	50	64	60	52	119	129	45	30	35	17	15	27	
24	77	60	59	49	109	113	40	41	38	16	15	25	
25	53	61	51	47	97	101	37	105	33	16	15	23	
26	41	60	50	44	90	94	37	207	30	16	16	23	
27	37	301	48	42	88	88	36	211	30	24	32	23	
28	35	428	45	42	77	80	34	582	30	18	21	22	
29	33	264	42	42	---	76	33	278	36	19	16	20	
30	64	179	40	40	---	72	32	135	32	17	15	19	
31	115	---	44	37	---	70	---	92	---	15	15	---	
TOTAL	1398	3992	2566	1370	6099	5068	1377	2383	4753	735	647	1478	
MEAN	45.1	133	82.8	44.2	218	163	45.9	76.9	158	23.7	20.9	49.3	
MAX	127	428	205	119	647	1160	66	582	1610	67	41	199	
MIN	27	50	40	32	38	50	32	27	30	15	15	17	
CFSM	.46	1.37	.85	.45	2.24	1.68	.47	.79	1.63	.24	.22	.51	
IN.	.54	1.53	.98	.52	2.33	1.94	.53	.91	1.82	.28	.25	.57	
CAL YR 1985	TOTAL	35727		MEAN	97.9	MAX	1430	MIN	15	CFSM	1.01	IN.	13.67
WTR YR 1986	TOTAL	31866		MEAN	87.3	MAX	1610	MIN	15	CFSM	.90	IN.	12.20

## CUMBERLAND RIVER BASIN

03432350 HARPETH RIVER AT FRANKLIN, TN

LOCATION.--Lat 35°55'14", long 86°51'56", Williamson County, Hydrologic Unit 05130204, on left bank 15 ft downstream from left downstream end of State Highway 96 bridge, 0.4 mi southeast of the courthouse in Franklin, and at mile 88.1.

DRAINAGE AREA.--191 mi<sup>2</sup>, includes 15 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 604.42 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, Jan. 20-23, May 28 to June 2, July 27 to Aug. 8, and those below 5.0 ft<sup>3</sup>/s, which are poor. The Franklin Utility District diverts part of its municipal water supply from the river above the gage. This water along with other water is returned to the river through the sewage treatment plant below the gage. Periodic observations of water temperature are published in this report as miscellaneous water quality data. U. S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--12 years, 298 ft<sup>3</sup>/s, 21.19 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,200 ft<sup>3</sup>/s, Mar. 13, 1975, gage height, 33.65 ft; minimum daily, 0.30 ft<sup>3</sup>/s, Oct. 14, 20, 22, 23, 26, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,900 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 17	2300	*4,700	*18.56	Sept. 5	0030	3,990	16.94

Minimum daily discharge, 0.62 ft<sup>3</sup>/s Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	19	21	136	19	11	113	79	23	84	8.2	.76	1.9	
2	14	34	145	18	36	102	74	28	109	10	.66	12	
3	11	45	120	19	170	98	70	18	231	23	.66	23	
4	9.8	39	94	23	126	85	67	18	126	20	.64	1500	
5	8.9	37	81	21	125	76	65	17	109	15	.62	1400	
6	7.8	24	66	18	182	72	61	17	227	7.0	.64	271	
7	2.7	19	54	16	164	67	62	17	372	4.7	1.0	138	
8	1.8	15	46	14	139	64	196	18	411	3.0	2.0	86	
9	1.5	15	43	14	110	59	162	16	319	2.2	1.4	65	
10	5.1	12	41	15	91	52	107	16	460	1.7	9.3	55	
11	1.1	7.6	36	18	81	50	87	12	228	1.5	35	43	
12	1.6	6.7	33	17	65	119	80	11	155	1.2	19	43	
13	3.7	6.2	50	14	58	2030	72	14	109	3.9	6.3	48	
14	6.2	7.1	62	11	234	881	59	22	84	1.2	2.2	38	
15	2.7	7.3	63	10	716	896	54	17	63	1.1	1.1	31	
16	2.3	14	54	10	441	614	49	12	53	1.3	19	26	
17	2.2	22	46	10	2420	441	47	12	44	1.3	83	25	
18	2.1	94	40	9.6	3160	370	48	8.2	37	2.0	29	20	
19	1.8	74	34	17	1070	407	44	21	33	4.4	16	34	
20	2.0	48	35	15	673	319	41	24	32	5.1	8.3	287	
21	1.9	36	35	14	492	252	46	19	26	1.4	4.6	93	
22	1.7	28	33	13	390	217	44	18	20	1.2	2.2	62	
23	2.3	21	30	12	320	198	41	19	17	1.3	1.1	47	
24	2.6	20	26	16	274	174	35	19	18	1.6	.82	39	
25	1.8	21	23	11	230	150	33	25	14	1.5	.94	36	
26	1.7	17	19	11	200	134	33	30	13	1.7	.93	27	
27	1.8	187	22	11	164	121	34	25	13	2.6	1.1	27	
28	5.4	523	24	13	130	110	27	405	8.4	1.9	1.1	37	
29	6.8	223	23	12	---	104	25	255	13	1.5	.91	30	
30	1.8	145	19	11	---	96	24	150	17	1.1	7.5	23	
31	4.9	---	19	14	---	85	---	110	---	.88	3.5	---	
TOTAL	140.0	1768.9	1552	446.6	12272	8556	1866	1416.2	3445.4	134.48	261.28	4567.9	
MEAN	4.52	59.0	50.1	14.4	438	276	62.2	45.7	115	4.34	8.43	152	
MAX	19	523	145	23	3160	2030	196	405	460	23	83	1500	
MIN	1.1	6.2	19	9.6	11	50	24	8.2	8.4	.88	.62	1.9	
CFSM	.02	.31	.26	.08	2.29	1.45	.33	.24	.60	.02	.04	.80	
IN.	.03	.34	.30	.09	2.39	1.67	.36	.28	.67	.03	.05	.89	
CAL YR 1985	TOTAL	38605.7		MEAN	106	MAX	1730	MIN	1.1	CFSM	.55	IN.	7.52
WTR YR 1986	TOTAL	36426.76		MEAN	99.8	MAX	3160	MIN	.62	CFSM	.52	IN.	7.09

## 03433500 HARPETH RIVER AT BELLEVUE, TN

LOCATION.--Lat 36°03'16", long 86°55'42", Davidson County, Hydrologic Unit 05130204, on right bank 45 ft upstream from bridge on State Highway 100, 0.1 mi downstream from Little Harpeth River, 0.9 mi southeast of Bellevue, and at mile 62.1.

DRAINAGE AREA.--408 mi<sup>2</sup>, includes 15 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--April 1920 to current year. Monthly discharge only November 1929 to December 1931, published in WSP 1306.

REVISED RECORDS.--WSP 953: 1920-30, 1932-35. WSP 1386: 1948. WSP 1556: Drainage area. WSP 1910: 1960.

GAGE.--Water-stage recorder. Datum of gage is 541.04 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers). Apr. 11, 1920, to Oct. 31, 1929, Jan. 1, 1932, to Sept. 30, 1933, non-recording gage at site 2.8 mi downstream at datum 7.85 ft lower.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--66 years, 580 ft<sup>3</sup>/s, 19.30 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft<sup>3</sup>/s, Feb. 13, 1948, gage height, 24.34 ft from floodmark; no flow Oct. 5-10, 1922.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, that of Feb. 13, 1948.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 18	0730	*9,550	*14.12	No other peak greater than base discharge.			

Minimum discharge, 6.5 ft<sup>3</sup>/s Aug. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	56	87	595	83	52	309	202	65	285	62	8.8	17	
2	105	169	629	81	347	281	193	63	257	47	8.0	23	
3	78	153	488	77	689	261	181	61	364	44	7.1	29	
4	60	171	383	77	483	237	170	55	365	56	7.1	1340	
5	50	140	324	78	407	213	161	51	274	50	6.9	3270	
6	43	115	274	75	544	200	155	49	364	41	7.1	637	
7	39	97	229	71	690	185	147	47	1350	33	8.5	318	
8	32	85	204	66	518	173	362	45	2360	28	10	195	
9	27	73	181	61	408	162	513	43	1410	24	14	136	
10	24	67	165	60	345	152	300	41	1290	24	9.9	108	
11	23	62	156	62	304	143	233	38	798	22	42	91	
12	25	54	150	65	253	245	198	36	538	23	107	85	
13	23	49	173	62	219	3340	180	34	385	19	52	82	
14	23	46	204	58	458	2360	160	34	296	21	32	80	
15	23	44	198	54	1620	2020	141	34	234	26	23	64	
16	25	58	188	53	1250	1490	129	35	188	18	288	55	
17	29	79	170	51	3400	1120	123	32	153	16	157	47	
18	30	145	152	52	8040	936	118	62	125	16	138	45	
19	27	224	141	62	3030	1420	117	95	107	15	72	48	
20	25	169	129	76	1760	1070	114	83	95	14	50	424	
21	25	130	128	70	1310	821	117	66	89	14	37	245	
22	25	110	123	61	1040	665	122	50	79	14	30	131	
23	29	97	121	57	847	556	111	43	69	12	25	99	
24	35	84	117	56	724	476	103	90	85	9.8	22	77	
25	40	82	106	56	598	411	92	86	66	9.0	19	65	
26	40	83	95	55	511	359	88	81	57	10	17	58	
27	33	717	88	52	445	319	83	112	50	16	16	47	
28	28	3280	91	50	365	287	81	626	48	23	16	41	
29	28	1020	92	52	---	263	74	2110	45	18	14	45	
30	40	642	88	54	---	241	68	860	47	13	14	41	
31	55	---	81	50	---	219	---	405	---	10	13	---	
TOTAL	1145	8332	6263	1937	30657	20934	4836	5532	11873	747.8	1271.4	7943	
MEAN	36.9	278	202	62.5	1095	675	161	178	396	24.1	41.0	265	
MAX	105	3280	629	83	8040	3340	513	2110	2360	62	288	3270	
MIN	23	44	81	50	52	143	68	32	45	9.0	6.9	17	
CFSM	.09	.68	.50	.15	2.68	1.65	.39	.44	.97	.06	.10	.65	
IN.	.10	.76	.57	.18	2.80	1.91	.44	.50	1.08	.07	.12	.72	
CAL YR 1985	TOTAL	106761.5		MEAN	292	MAX	4700	MIN	9.3	CFSM	.72	IN.	9.73
WTR YR 1986	TOTAL	101471.2		MEAN	278	MAX	8040	MIN	6.9	CFSM	.68	IN.	9.25



## CUMBERLAND RIVER BASIN

03434500 HARPETH RIVER NEAR KINGSTON SPRINGS, TN

LOCATION.--Lat 36°07'19", long 87°05'56", Cheatham County, Hydrologic Unit 05130204, on right bank 400 ft upstream from bridge on U. S. Highway 70, 1.7 mi northeast of Kingston Springs, 3.0 mi downstream from Turnbull Creek, and at mile 32.4.

DRAINAGE AREA.--681 mi<sup>2</sup>, includes 15 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--October 1924 to current year. Prior to July 1925 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 953: 1927, 1933, 1935-36. WSP 1033: 1927(M), 1932-33(M), 1935(M), 1937(M). WSP 1706: 1945(P). WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 448.04 ft above National Geodetic Vertical Datum of 1929. July 8, 1925, to Jan. 22, 1939, nonrecording gage at site 150 ft downstream at same datum.

REMARKS.--Estimated daily discharges: July 20-27. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data. U. S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--62 years, 979 ft<sup>3</sup>/s, 19.52 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,000 ft<sup>3</sup>/s, Jan. 7, 1946, gage height, 32.20 ft from high-water mark in gage house; minimum, 12 ft<sup>3</sup>/s, Sept. 18, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, that of Jan. 7, 1946. Flood of March 1902 reached a stage about 3 ft lower than that of Jan. 7, 1946.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 10,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 18	1200	*10,100	*12.96	No other peak greater than base discharge.			

Minimum discharge, 37 ft<sup>3</sup>/s Aug. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	277	389	936	182	141	527	400	166	487	134	52	67	
2	215	435	1060	177	670	482	379	171	407	153	43	76	
3	202	398	807	176	2470	450	365	161	1100	141	40	102	
4	164	376	647	169	1180	425	346	154	658	124	45	116	
5	136	311	548	165	897	397	330	146	555	128	45	3280	
6	121	257	479	163	1050	379	315	140	556	128	47	930	
7	113	224	416	163	1670	354	306	137	1490	115	69	410	
8	105	205	370	149	1100	329	436	139	4660	106	78	272	
9	99	178	337	139	839	314	717	137	4080	98	67	206	
10	94	162	307	143	695	304	538	127	2700	94	62	170	
11	91	152	304	144	611	290	430	123	1480	91	103	150	
12	89	148	319	148	518	645	376	122	977	88	96	145	
13	86	138	338	148	458	4590	342	121	716	86	146	140	
14	90	131	371	141	667	3760	319	109	565	86	110	128	
15	118	128	359	140	2030	2570	295	103	475	105	95	124	
16	106	156	348	134	2020	2070	272	104	403	114	111	113	
17	91	219	326	135	3170	1490	261	105	350	95	390	101	
18	90	213	299	138	9480	1210	251	105	304	87	224	103	
19	92	276	263	250	5240	2300	243	289	270	83	182	109	
20	91	307	260	221	2640	1810	246	274	243	73	131	130	
21	93	257	240	203	1880	1290	272	203	223	65	113	355	
22	92	222	240	185	1450	1030	262	167	208	60	99	217	
23	103	198	242	168	1180	884	246	145	189	56	90	164	
24	171	185	235	158	1000	775	229	158	256	54	84	136	
25	135	199	218	153	873	681	217	318	227	53	78	118	
26	109	193	238	154	757	612	205	263	182	53	77	107	
27	107	809	200	140	685	567	196	319	161	127	104	101	
28	103	4660	191	129	602	520	188	844	146	98	93	93	
29	97	1920	186	141	---	483	185	1960	147	75	72	86	
30	100	1090	180	143	---	453	172	1560	141	74	67	84	
31	135	---	186	140	---	427	---	681	---	67	64	---	
TOTAL	3715	14536	11450	4939	45973	32418	9339	9551	24356	2911	3077	8333	
MEAN	120	485	369	159	1642	1046	311	308	812	93.9	99.3	278	
MAX	277	4660	1060	250	9480	4590	717	1960	4660	153	390	3280	
MIN	86	128	180	129	141	290	172	103	141	53	40	67	
CFSM	.18	.71	.54	.23	2.41	1.54	.46	.45	1.19	.14	.15	.41	
IN.	.20	.79	.63	.27	2.51	1.77	.51	.52	1.33	.16	.17	.46	
CAL YR 1985	TOTAL	183835		MEAN	504	MAX	7190	MIN	74	CFSM	.74	IN.	10.04
WTR YR 1986	TOTAL	170598		MEAN	467	MAX	9480	MIN	40	CFSM	.69	IN.	9.32



## CUMBERLAND RIVER BASIN

81

03434615 BAKER SPRING NEAR CHARLOTTE, TN

LOCATION.--Lat 36°10'54", long 87°19'00", Dickson County, Hydrologic Unit 05130204, at north edge of State Highway 49, 1.4 mi east of Charlotte.

PERIOD OF RECORD.--May 1985 to June 1986 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 570 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: May 1-3, June 2-5, 1985. Records fair.

EXTREMES FOR CURRENT PERIOD.--May 1985 to June 1986: Maximum daily discharge, 1.8 ft<sup>3</sup>/s, Mar. 19, 1986. Minimum daily discharge, 0.16 ft<sup>3</sup>/s, Sept. 19-22, 1985.

DISCHARGE, IN CUBIC FEET PER SECOND, MAY 1985 TO SEPTEMBER 1985  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								.90	.46	.38	.33	.29
2								1.1	.45	.37	.32	.29
3								1.2	.44	.35	.31	.29
4								1.3	.43	.35	.31	.27
5								1.2	.42	.38	.33	.27
6								1.1	.42	.44	.33	.28
7								.94	.43	.39	.32	.27
8								.85	.42	.38	.31	.27
9								.78	.41	.36	.31	.27
10								.73	.41	.35	.31	.25
11								.70	.41	.35	.30	.23
12								.67	.41	.35	.30	.21
13								.65	.40	.34	.29	.19
14								.62	.40	.33	.29	.18
15								.60	.40	.33	.28	.18
16								.58	.39	.33	.32	.18
17								.57	.40	.32	.36	.18
18								.54	.39	.32	.33	.18
19								.52	.38	.31	.33	.16
20								.52	.38	.31	.34	.16
21								.51	.38	.31	.33	.16
22								.53	.40	.31	.32	.16
23								.51	.39	.31	.31	.21
24								.49	.38	.31	.32	.29
25								.47	.38	.30	.32	.32
26								.47	.38	.31	.31	.43
27								.47	.37	.39	.31	.34
28								.47	.38	.36	.31	.32
29								.46	.37	.35	.31	.31
30								.46	.37	.34	.30	.34
31								.46	---	.33	.30	---
TOTAL								21.37	12.05	10.66	9.76	7.48
MEAN								.69	.40	.34	.31	.25
MAX								1.3	.46	.44	.36	.43
MIN								.46	.37	.30	.28	.16

## CUMBERLAND RIVER BASIN

03434615 BAKER SPRING NEAR CHARLOTTE, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1985 TO JUNE 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.39	.68	.74	.30	.29	.52	.59	.39	.33			
2	.34	.67	.70	.29	.76	.51	.58	.38	.33			
3	.35	.57	.62	.29	1.7	.50	.56	.38	.35			
4	.35	.55	.57	.29	1.1	.48	.54	.38	.37			
5	.34	.49	.54	.29	1.2	.47	.52	.37	.39			
6	.33	.45	.50	.29	1.2	.47	.51	.37	.42			
7	.33	.42	.46	.28	1.3	.45	.50	.37	.46			
8	.33	.40	.45	.27	1.3	.44	.51	.37	.67			
9	.33	.39	.43	.27	1.1	.44	.49	.36	.59			
10	.33	.38	.42	.27	.92	.45	.47	.35	.61			
11	.33	.38	.46	.27	.81	.45	.47	.35	.59			
12	.33	.38	.48	.27	.69	.58	.47	.34	.60			
13	.33	.38	.50	.27	.62	1.2	.45	.33	.60			
14	.36	.38	.48	.27	.83	1.4	.45	.33	.60			
15	.40	.38	.47	.27	1.1	1.1	.44	.33	.58			
16	.35	.46	.47	.27	1.2	.96	.42	.33	.54			
17	.34	.45	.45	.27	1.3	.86	.42	.32	.50			
18	.33	.45	.42	.29	1.5	1.0	.41	.33	.45			
19	.36	.45	.40	.45	1.3	1.8	.40	.35	.41			
20	.38	.43	.40	.40	1.2	1.3	.43	.33	.39			
21	.39	.41	.38	.38	1.0	1.4	.44	.32	.38			
22	.38	.40	.38	.37	.85	1.2	.42	.32	.37			
23	.44	.40	.38	.35	.76	1.0	.40	.33	.36			
24	.46	.39	.37	.33	.71	.90	.40	.37	.35			
25	.41	.39	.34	.33	.65	.82	.40	.39	.34			
26	.40	.39	.33	.33	.65	.78	.40	.38	.34			
27	.38	.95	.33	.32	.63	.72	.40	.37	.33			
28	.38	1.3	.31	.31	.56	.68	.40	.37	.33			
29	.38	1.0	.31	.31	---	.65	.40	.35	.33			
30	.38	.80	.31	.30	---	.64	.39	.34	.32			
31	.40	---	.31	.29	---	.61	---	.33	---			
TOTAL	11.33	15.57	13.71	9.49	27.23	24.78	13.68	10.93	13.23			
MEAN	.37	.52	.44	.31	.97	.80	.46	.35	.44			
MAX	.46	1.3	.74	.45	1.7	1.8	.59	.39	.67			
MIN	.33	.38	.31	.27	.29	.44	.39	.32	.32			

## CUMBERLAND RIVER BASIN

83

03435000 CUMBERLAND RIVER BELOW CHEATHAM DAM, TN

LOCATION.--Lat 36°19'26", long 87°13'32", Cheatham County, Hydrologic Unit 05130205, on downstream end of lower lock wall at Cheatham Dam, 2.0 mi southwest of Neptune, 3.0 mi upstream from Half Pone Creek, 9.7 mi west of Ashland City, and at mile 148.4.

DRAINAGE AREA.--14,163 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1954 to current year.

REVISED RECORDS.--WSP 1726: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 350.00 ft above National Geodetic Vertical Datum of 1929. Prior to May 5, 1966, at National Geodetic Vertical Datum. Auxiliary water-stage recorder 15.3 mi downstream from base gage at same datum. Prior to June 3, 1966, auxiliary water-stage recorder and non-recording gage on upper lock wall at former dam B, at site 8.1 mi downstream from base gage at datum 1.76 ft lower.

REMARKS.--Records good except for those of estimated daily discharges: Oct. 16 to Nov. 13, Mar. 17 to Apr. 22, Apr. 26 to May 27, June 2-3, July 27 to Aug. 21, which are fair. Flow regulated by eight lakes or reservoirs above station (see p. 88).

AVERAGE DISCHARGE.--32 years, 23,350 ft<sup>3</sup>/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 204,000 ft<sup>3</sup>/s, Mar. 15, 1975; maximum gage height, 48.39 ft, Mar. 1, 1962; minimum daily discharge, 700 ft<sup>3</sup>/s, Oct. 29, 1969; minimum gage height, 1.55 ft, Nov. 26, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1793, 53.5 ft; Jan. 25, 1937, from profile by U. S. Army Corps of Engineers, discharge, about 200,000 ft<sup>3</sup>/s on Jan. 24, 1937. Flood of Jan. 1, 1927, reached a stage of 51.7 ft, from profile, discharge about 205,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 95,200 ft<sup>3</sup>/s on Feb. 18; maximum gage height, 27.86 ft on Feb. 18; minimum daily discharge, 1,320 ft<sup>3</sup>/s on Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5810	11000	19200	11200	10500	15300	5500	7500	6430	4010	11800	6040
2	5450	11500	20700	19400	14700	10000	7000	12000	7500	6810	13300	4530
3	5700	9500	19800	20700	15100	12800	8500	11500	6000	12000	8400	4500
4	4860	5000	21200	18900	18900	13100	10000	7500	9250	10500	6600	27000
5	5930	4500	25500	14400	22600	14200	10500	4500	17000	6800	6200	43900
6	4830	5500	26300	9320	31700	13700	8000	4000	20100	4620	7500	29200
7	4350	6000	23000	8370	28500	13900	6500	6000	21200	3840	9000	26000
8	3920	10000	19600	14400	17700	12400	6500	8000	47800	6220	12500	20400
9	6210	10500	20000	17300	13600	10000	8000	6500	38000	6950	11600	15200
10	7350	9000	19800	20000	14500	9460	11500	7500	53800	9030	7300	8270
11	6980	6000	21100	15200	9810	8970	10000	5500	35500	11000	7300	12700
12	5580	8000	22900	12200	13500	8030	12000	4500	21800	10200	7400	18800
13	6090	7220	26500	7250	18000	19500	11000	5000	14600	6040	7600	15700
14	4630	5000	30600	5100	16700	79900	6000	7000	10000	4880	11200	13900
15	6190	9320	31700	4590	23300	78200	3000	6500	6020	5470	13000	6710
16	7000	6940	29500	8060	21400	34800	6500	8000	2920	7360	15500	4630
17	8500	5120	30600	9540	40500	25000	9500	7500	5900	11000	13000	8320
18	11000	6640	29500	7430	83300	15000	12000	7000	4900	11800	9000	10400
19	9500	10700	29600	3300	63400	25000	10000	5500	5050	11700	7600	10800
20	7000	12600	28300	5050	37400	18000	6500	6000	4670	5570	7000	9730
21	5000	15000	26500	7210	26600	20000	4500	7500	6040	5630	11200	8570
22	6000	15500	29500	8540	15500	19000	6270	10500	5610	4740	11100	1320
23	13000	13700	22300	8190	14500	16000	7590	7500	4170	5880	9450	5780
24	18000	12500	17800	7560	17900	14000	10500	16000	5270	9650	7540	7630
25	17000	9360	21600	11800	19000	12000	10700	14500	7910	8910	6340	8680
26	8000	9790	24600	5970	19100	9500	10900	10000	7400	8250	5690	8710
27	6000	17200	25500	6200	22300	10000	7500	8000	8520	7200	6400	8930
28	6000	47800	27200	8020	21100	7500	5500	11800	8170	5000	9190	5320
29	7000	49900	21300	11600	---	7500	3500	20900	7690	6900	10900	3220
30	6500	34300	16100	18500	---	9000	4500	17900	4380	8300	9780	3470
31	6500	---	9530	13800	---	5500	---	10400	---	10000	8750	---
TOTAL	225880	385090	737330	339100	671110	567260	239960	272500	403600	236260	289140	358360
MEAN	7286	12840	23780	10940	23970	18300	7999	8790	13450	7621	9327	11950
MAX	18000	49900	31700	20700	83300	79900	12000	20900	53800	12000	15500	43900
MIN	3920	4500	9530	3300	9810	5500	3000	4000	2920	3840	5690	1320
CAL YR 1985	TOTAL	5541240		MEAN	15180	MAX	58800	MIN	2680			
WTR YR 1986	TOTAL	4725590		MEAN	12950	MAX	83300	MIN	1320			

## CUMBERLAND RIVER BASIN

03435770 SULPHUR FORK RED RIVER ABOVE SPRINGFIELD, TN

LOCATION.--Lat 36°30'47", long 86°51'44", Robertson County, Hydrologic Unit 05130206, on left bank 150 ft downstream from new bridge on State Highway 49, 1.2 mi downstream from Beaver Dam Creek, 1.3 mi northeast of Springfield, and at mile 30.8.

DRAINAGE AREA.--65.6 mi<sup>2</sup>, includes 9.0 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--August 1975 to current year.

GAGE.--Water-stage recorder, and crest-stage gage. Datum of gage is 538.17 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers).

REMARKS.--Estimated daily discharges: Oct. 3 to Nov. 4. Records fair, except for period of no gage-height record Oct. 3 to Nov. 4, which are poor. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--11 years, 102 ft<sup>3</sup>/s, 21.12 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft<sup>3</sup>/s, Dec. 8, 1978, gage height, 14.14 ft; minimum, 2.4 ft<sup>3</sup>/s, Oct. 1-4, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft<sup>3</sup>/s, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 17	1930	*2,320	*9.42	June 8	0215	2,270	9.32

Minimum discharge, 4.0 ft<sup>3</sup>/s Aug. 25, 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	44	110	155	21	18	53	41	17	172	69	6.5	8.1	
2	27	95	149	20	20	49	40	18	292	34	7.1	11	
3	20	83	106	20	165	47	37	17	302	23	7.1	13	
4	17	87	87	19	141	43	35	17	395	20	7.1	65	
5	14	56	76	19	109	41	32	16	335	19	7.1	34	
6	12	46	63	18	323	40	31	16	318	17	9.2	16	
7	11	37	54	18	369	37	30	16	450	16	16	10	
8	10	31	48	17	234	33	30	16	952	16	19	8.4	
9	9.7	26	44	21	175	34	27	16	491	18	17	6.4	
10	9.3	24	40	18	136	33	26	14	416	18	13	6.2	
11	9.1	70	51	18	113	32	25	14	267	15	13	6.2	
12	9.0	76	74	17	90	69	25	14	201	15	11	38	
13	8.7	58	71	17	78	455	24	13	149	14	9.1	14	
14	10	49	66	17	83	214	23	15	114	14	7.3	8.7	
15	20	43	58	17	84	153	22	20	93	23	7.1	7.6	
16	17	76	55	15	200	116	22	18	73	16	16	6.2	
17	14	90	51	15	944	91	22	15	61	12	15	6.1	
18	11	75	44	16	688	114	20	14	52	11	9.9	6.2	
19	11	63	34	44	366	405	20	34	47	11	8.5	22	
20	22	53	34	34	256	218	23	27	42	11	5.5	13	
21	29	45	32	26	199	158	27	19	39	8.7	5.5	8.5	
22	21	44	31	23	158	124	26	18	35	7.3	5.5	10	
23	19	40	34	20	126	105	22	22	32	7.1	5.5	9.0	
24	25	36	33	19	107	87	20	56	32	7.1	5.5	7.9	
25	21	34	27	19	86	74	20	75	28	7.1	4.5	6.9	
26	18	33	26	19	80	66	19	195	25	7.1	4.0	4.9	
27	15	151	25	17	73	59	18	183	23	6.4	6.4	6.4	
28	14	228	24	16	60	53	18	426	22	6.6	12	7.1	
29	13	190	23	18	---	49	18	256	23	7.9	9.8	6.9	
30	26	130	20	17	---	45	17	166	22	6.8	6.1	5.5	
31	55	---	23	17	---	44	---	105	---	5.5	5.5	---	
TOTAL	561.8	2179	1658	612	5481	3141	760	1868	5503	469.6	281.8	379.2	
MEAN	18.1	72.6	53.5	19.7	196	101	25.3	60.3	183	15.1	9.09	12.6	
MAX	55	228	155	44	944	455	41	426	952	69	19	65	
MIN	8.7	24	20	15	18	32	17	13	22	5.5	4.0	4.9	
CFSM	.28	1.11	.82	.30	2.99	1.54	.39	.92	2.79	.23	.14	.19	
IN.	.32	1.24	.94	.35	3.11	1.78	.43	1.06	3.12	.27	.16	.22	
CAL YR 1985	TOTAL	19829.2		MEAN	54.3	MAX	709	MIN	5.1	CFSM	.83	IN.	11.24
WTR YR 1986	TOTAL	22894.4		MEAN	62.7	MAX	952	MIN	4.0	CFSM	.96	IN.	12.98



## 03436000 SULPHUR FORK RED RIVER NEAR ADAMS, TN

LOCATION.--Lat 36°30'55", long 85°03'32", Robertson County, Hydrologic Unit 05130206, on left bank 600 ft downstream from county highway bridge, 2.8 mi downstream from Millers Creek, 4.1 mi southwest of Cedar Hill, 4.6 mi south of Adams, and at mile 10.2.

DRAINAGE AREA.--186 mi<sup>2</sup>, includes 21 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--October 1938 to current year. Prior to January 1939, monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 1910: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 424.36 ft Sandy Hook datum. Jan. 20, 1939, to Nov. 25, 1940, non-recording gage at site 600 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Feb. 17 to Mar. 4. Records good, except for the period of no gage-height record Feb. 17 to Mar. 4, which are fair. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--48 years, 251 ft<sup>3</sup>/s, 18.33 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,400 ft<sup>3</sup>/s, Mar. 12, 1975, gage height, 30.86 ft, from floodmarks; minimum, 1.8 ft<sup>3</sup>/s, Sept. 27, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1934 reached a stage of 25.1 ft, from floodmarks, discharge not determined. Flood in January 1937 reached a stage of about 22.6 ft, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 17	Unknown	*4,040	*11.54	June 8	0745	3,610	10.88
June 4	0015	3,420	10.58				

Minimum discharge, 18 ft<sup>3</sup>/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	160	397	371	72	56	165	124	50	254	106	23	19	
2	115	383	419	68	67	150	118	48	625	101	23	22	
3	75	296	309	68	494	140	112	46	606	77	22	23	
4	58	312	255	65	473	133	106	45	1220	63	22	231	
5	48	225	222	64	360	128	100	44	684	58	21	222	
6	42	175	193	61	796	127	96	45	683	53	26	68	
7	38	144	165	60	1090	118	92	44	662	50	41	42	
8	36	120	149	57	621	109	90	45	2000	48	58	33	
9	34	103	136	58	468	104	86	44	905	51	49	28	
10	32	91	124	57	390	102	81	41	1010	69	38	25	
11	32	176	156	56	334	100	78	41	648	51	33	23	
12	30	288	242	55	271	137	76	40	550	47	29	46	
13	30	196	227	55	234	1180	74	41	390	43	26	55	
14	37	160	217	54	239	588	72	42	308	42	25	29	
15	72	135	187	52	252	432	69	59	257	73	24	23	
16	62	176	176	51	403	330	66	50	214	61	33	21	
17	43	268	161	51	2600	265	65	43	180	46	53	20	
18	37	210	145	54	1800	292	64	40	155	42	34	32	
19	36	180	125	110	1100	1400	62	52	138	39	28	84	
20	83	155	118	117	750	693	70	82	126	37	25	53	
21	104	132	112	92	570	500	94	54	118	34	23	34	
22	71	121	105	81	450	392	86	45	108	33	22	28	
23	67	112	109	72	370	327	70	50	99	31	21	27	
24	91	102	106	67	310	271	63	64	105	30	20	25	
25	74	98	97	66	260	233	61	179	91	29	19	23	
26	61	96	94	65	230	206	59	324	81	30	20	28	
27	53	275	85	62	200	186	55	439	76	31	20	22	
28	48	503	82	64	180	167	54	470	73	28	22	22	
29	44	479	77	57	---	152	54	498	75	28	21	20	
30	93	364	73	60	---	142	51	416	70	28	20	18	
31	199	---	72	56	---	133	---	241	---	26	19	---	
TOTAL	2005	6472	5109	2027	15368	9402	2348	3722	12511	1485	860	1346	
MEAN	64.7	216	165	65.4	549	303	78.3	120	417	47.9	27.7	44.9	
MAX	199	503	419	117	2600	1400	124	498	2000	106	58	231	
MIN	30	91	72	51	56	100	51	40	70	26	19	18	
CFSM	.35	1.16	.89	.35	2.95	1.63	.42	.65	2.24	.26	.15	.24	
IN.	.40	1.29	1.02	.41	3.07	1.88	.47	.74	2.50	.30	.17	.27	
CAL YR 1985	TOTAL	63158		MEAN	173	MAX	1630	MIN	16	CFSM	.93	IN.	12.63
WTR YR 1986	TOTAL	62655		MEAN	172	MAX	2600	MIN	18	CFSM	.92	IN.	12.53

## CUMBERLAND RIVER BASIN

03436100 RED RIVER AT PORT ROYAL, TN

LOCATION.--Lat 36°33'17", long 87°08'31", Montgomery County, Hydrologic Unit 05130206, on left bank at county road bridge at Port Royal, 250 ft downstream from Sulphur Fork, and at mile 25.5.

DRAINAGE AREA.--935 mi<sup>2</sup> includes 437 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--July 1961 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 376.25 ft above National Geodetic Vertical Datum of 1929. July 13, 1961, to Oct. 9, 1963, nonrecording gage and crest-stage gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--25 years, 1,343 ft<sup>3</sup>/s, 19.51 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,300 ft<sup>3</sup>/s, Mar. 13, 1975, gage height, 48.26 ft; minimum, 54 ft<sup>3</sup>/s, Sept. 17, 18, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 23, 1937, reached a stage of 44.4 ft; from flood profile of U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 11,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 18	1345	*12,200	*24.95	No other peak greater than base discharge.			

Minimum discharge, 108 ft<sup>3</sup>/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	389	2510	1980	466	289	1260	769	302	1290	663	181	119	
2	419	3620	2230	443	304	1140	724	289	2240	646	172	121	
3	395	2590	1910	429	1310	1060	702	280	1670	570	165	125	
4	332	2340	1620	418	2170	971	675	267	2730	511	161	184	
5	275	2020	1460	407	1760	890	645	266	2150	445	157	722	
6	240	1670	1310	394	2210	837	625	263	2600	411	156	352	
7	216	1410	1140	383	5350	778	608	257	2840	389	179	214	
8	197	1180	1020	365	3920	721	598	252	5020	372	206	164	
9	185	998	927	346	2800	698	584	249	3980	351	213	142	
10	175	868	832	343	2320	681	558	244	3980	456	221	132	
11	169	880	846	343	2040	660	534	232	3010	399	202	127	
12	163	1050	1760	337	1760	673	519	233	2760	374	204	162	
13	156	934	1650	334	1540	3170	498	228	2120	349	177	228	
14	164	797	1480	324	1450	3170	476	230	1740	316	164	165	
15	379	722	1300	314	1440	2100	444	414	1480	336	158	152	
16	547	709	1160	308	1520	1670	424	607	1270	371	168	135	
17	361	983	1070	299	5320	1380	414	403	1090	332	209	124	
18	276	1040	983	304	11200	1240	406	320	946	293	188	129	
19	241	837	859	391	6570	4420	396	303	829	274	176	233	
20	276	743	772	475	4410	4300	402	329	743	261	157	212	
21	455	684	729	499	3510	2740	436	327	697	244	146	177	
22	376	646	702	419	2870	2190	435	284	654	232	141	160	
23	385	622	694	383	2460	1900	404	273	619	222	135	164	
24	434	597	683	355	2180	1670	382	950	1530	213	131	161	
25	503	573	650	343	1940	1470	367	1280	1220	206	129	139	
26	449	567	606	334	1740	1310	359	1410	764	205	128	130	
27	392	1190	583	325	1640	1190	345	1880	659	280	129	125	
28	352	2630	557	301	1460	1070	333	1620	610	308	125	120	
29	316	2640	536	309	---	980	321	2090	584	244	122	114	
30	422	2220	511	299	---	904	312	2090	548	221	119	110	
31	2210	---	490	293	---	832	---	1720	---	195	119	---	
TOTAL	11849	40270	33050	11283	77483	48075	14695	19892	52373	10689	5038	5342	
MEAN	382	1342	1066	364	2767	1551	490	642	1746	345	163	178	
MAX	2210	3620	2230	499	11200	4420	769	2090	5020	663	221	722	
MIN	156	567	490	293	289	660	312	228	548	195	119	110	
CFSM	.41	1.44	1.14	.39	2.96	1.66	.52	.69	1.87	.37	.17	.19	
IN.	.47	1.60	1.31	.45	3.08	1.91	.58	.79	2.08	.43	.20	.21	
CAL YR 1985	TOTAL	351939		MEAN	964	MAX	8360	MIN	102	CFSM	1.03	IN.	14.00
WTR YR 1986	TOTAL	330039		MEAN	904	MAX	11200	MIN	110	CFSM	.97	IN.	13.13

## CUMBERLAND RIVER BASIN

87

03436690 YELLOW CREEK AT ELLIS MILLS, TN

LOCATION.--Lat 36°18'39", long 87°33'15", Houston County, Hydrologic Unit 05130205, on right bank at downstream end of bridge on county road, 0.3 mi northeast of Ellis Mills, 1.0 mi upstream from Leatherwood Creek, 1.0 mi downstream from Williamson Branch.

DRAINAGE AREA.--103 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 417 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 25 to Dec. 14. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--6 years, 152 ft<sup>3</sup>/s, 20.04 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,400 ft<sup>3</sup>/s May 6, 1984, gage height, 18.47 ft recorded; 18.95 ft, from floodmarks, from rating curve extended above 9,500 ft<sup>3</sup>/s on basis of regression formula and peak discharge at Station No. 03436700 Yellow Creek near Shiloh, TN; minimum, 12 ft<sup>3</sup>/s Sept. 9, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 2	2400	2,300	9.08	June 9	1715	*2,440	*9.32
Mar 19	0430	2,010	8.57				

Minimum discharge, 15 ft<sup>3</sup>/s Aug. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	47	306	180	52	43	126	124	54	41	38	19	19	
2	46	351	210	51	219	114	118	53	39	36	18	21	
3	41	236	160	50	1430	112	106	51	43	36	18	21	
4	38	184	130	49	679	108	102	52	45	35	17	42	
5	35	153	112	47	440	97	98	50	50	33	15	60	
6	33	132	96	46	446	96	94	49	69	32	22	44	
7	31	111	85	45	601	92	93	49	66	31	38	36	
8	30	91	80	44	426	87	92	49	83	30	47	31	
9	28	83	75	42	343	85	87	48	551	30	35	28	
10	28	89	70	42	308	82	83	47	377	29	31	28	
11	27	98	80	42	270	78	82	46	223	28	45	28	
12	27	89	125	42	219	102	80	46	160	28	35	37	
13	25	83	119	41	176	434	80	45	126	28	30	35	
14	33	79	110	41	198	360	75	45	103	32	28	31	
15	45	77	105	41	287	296	73	45	89	32	27	29	
16	42	80	102	40	324	252	70	46	79	30	30	27	
17	37	82	98	40	497	216	68	44	72	29	33	26	
18	34	80	92	42	508	231	65	42	64	28	30	34	
19	34	76	85	52	410	1370	65	45	59	27	27	45	
20	44	73	83	54	354	636	67	43	55	26	25	42	
21	52	71	80	52	305	413	74	41	52	25	23	39	
22	47	68	77	52	270	332	70	40	51	24	23	37	
23	57	64	77	49	231	291	67	40	48	23	23	34	
24	111	62	73	47	204	252	65	47	48	21	21	32	
25	100	58	68	47	174	222	64	53	47	19	21	29	
26	82	64	63	47	164	200	62	49	44	19	20	29	
27	70	320	61	46	154	176	61	50	43	25	24	31	
28	60	470	57	46	138	162	59	48	41	25	20	28	
29	57	250	56	46	---	150	56	46	41	21	18	27	
30	62	160	54	45	---	138	55	45	39	23	18	25	
31	74	---	54	44	---	132	---	43	---	21	18	---	
TOTAL	1477	4140	2917	1424	9818	7442	2355	1451	2848	864	799	975	
MEAN	47.6	138	94.1	45.9	351	240	78.5	46.8	94.9	27.9	25.8	32.5	
MAX	111	470	210	54	1430	1370	124	54	551	38	47	60	
MIN	25	58	54	40	43	78	55	40	39	19	15	19	
CFSM	.46	1.34	.91	.45	3.40	2.33	.76	.45	.92	.27	.25	.32	
IN.	.53	1.49	1.05	.51	3.54	2.68	.85	.52	1.03	.31	.29	.35	
CAL YR 1985	TOTAL	46239		MEAN	127	MAX	931	MIN	19	CFSM	1.23	IN.	16.68
WTR YR 1986	TOTAL	36510		MEAN	100	MAX	1430	MIN	15	CFSM	.97	IN.	13.17



## CUMBERLAND RIVER BASIN

## RESERVOIRS IN CUMBERLAND RIVER BASIN

03413500 LAKE CUMBERLAND.--Lat 36°52'09", long 85°08'45", Russell County, KY, Hydrologic Unit 05130103, in pylon of Wolf Creek Dam on Cumberland River and 10 mi southwest of Jamestown, Ky. DRAINAGE AREA, 5,789 mi<sup>2</sup>. PERIOD OF RECORD, April 1950 to current year. Prior to October 1954, published as Wolf Creek Reservoir. April to June 1950, published in WSP 1726. GAGE, water-stage recorder. Datum of gage is Sandy Hook datum. Prior to Dec. 6, 1950, nonrecording gage at same site at datum 545.0 ft higher.

REVISIONS.--WSP 1556: Drainage area.

REMARKS.--Reservoir is formed by earth embankment and concrete gravity dam surmounted by 10 tainter gates, each 37 ft high by 50 ft wide. Final closure of dam made Aug. 7, 1950. Total capacity at elevation 760.00 ft top of gates, is 3,070,000 cfs-days, of which 1,056,000 cfs-days above elevation 723.00 ft, crest of spillway, are reserved for flood control and 1,080,000 cfs-days between elevation 673.00 ft, minimum power pool, and 723.00 ft are used for power production. Figures given herein represent total contents, of which 934,000 cfs-days below elevation 673.00 ft is dead storage. Reservoir is used for flood control, power, navigation, and recreation.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,811,000 cfs-days, May 13, 1984, elevation, 751.70 ft; minimum, after first filling, 934,400 cfs-days, Jan. 1, 1956, elevation, 673.01 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,833,400 cfs-days, Mar. 31, elevation, 715.71 ft; minimum, 1,191,700 cfs-days, Feb. 2, elevation, 686.57 ft.

03416500 DALE HOLLOW LAKE.--Lat 36°32'19", long 85°27'05", Clay County, Hydrologic Unit 05130105, at Dale Hollow Dam on Obey River, 3 mi east of Celina, and 7.3 mi upstream from mouth. DRAINAGE AREA, 936 mi<sup>2</sup>. PERIOD OF RECORD, August 1943 to current year. Prior to October 1965, published as Dale Hollow Reservoir. GAGE, water-stage recorder. Datum of gage is Sandy Hook datum. Prior to June 25, 1946, nonrecording gage at same site and datum.

REVISIONS.--WSP 1306: 1944. WSP 2110: Drainage area.

REMARKS.--Reservoir is formed by concrete gravity dam. Spillway is equipped with six tainter gates, each 12 ft high by 60 ft wide. Closure of dam was made Aug. 30, 1943; water in reservoir first reached minimum pool elevation May 7, 1944. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 663.0 ft, top of gates, is 859,800 cfs-days of which 177,500 cfs-days between elevations 663.00 ft and 651.00 ft, crest of spillway, are reserved for flood control, and 250,200 cfs-days between elevations 651.00 ft and 631.00 ft, ordinary minimum pool, are used for power production. Contents of 432,100 cfs-days below elevation 631.00 ft is dead storage. Reservoir is used for flood control, navigation, and power.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 828,600 cfs-days, Mar. 15, 1975, elevation, 660.98 ft; minimum, after first filling, 428,000 cfs-days, Sept. 11, 1944, elevation, 630.63 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 642,000 cfs-days, June 13, elevation, 648.07 ft; minimum, 505,800 cfs-days, Jan. 29, elevation, 637.40 ft.

03418400 CORDELL HULL RESERVOIR.--Lat 36°17'23", long 85°56'39", Smith County, Hydrologic Unit 05130108, at Cordell Hull Dam on Cumberland River, 2.7 mi north of Carthage, and at mile 313.5. DRAINAGE AREA, 8,095 mi<sup>2</sup>. PERIOD OF RECORD, October 1972 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete gravity dam with earth embankment. Spillway is equipped with five tainter gates, each 41 ft high and 45 ft wide. Closure of dam was made Oct. 4, 1967; water in reservoir first reached ordinary minimum pool Mar. 13, 1973. Total capacity at elevation 508.0 ft, maximum surcharge pool, is 156,700 cfs-days, of which 53,400 cfs-days is controlled storage between elevations 508.0 ft and 499.0 ft, ordinary minimum pool. Contents of 5,000 cfs-days between elevation of 499.0 ft and 500.0 ft full winter pool, is available for power production. Contents of 48,400 cfs-days above 500.0 ft is available for flood control during the winter, and 26,100 cfs-days above 504.0 ft, full pool during spring to fall season, is available for flood control the rest of the year. Contents of 103,300 cfs-days below elevation 499.0 ft is dead storage. Reservoir is used for navigation, power, and flood control.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 156,700 cfs-days, Mar. 13, 1975, May 8, 1984, elevation, 508.00 ft; minimum, after first filling to ordinary minimum pool, 96,700 cfs-days, Apr. 18, 1974, elevation, 497.65 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 134,600 cfs-days, May 23, elevation, 504.64 ft; minimum, 102,900 cfs-days, Dec. 7, elevation, 498.98 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	03413500 LAKE CUMBERLAND			03416500 DALE HOLLOW LAKE			03418400 CORDELL HULL RESERVOIR		
	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
Sept. 30.....	699.53	1,461,600	-	639.52	531,600	-	503.62	128,400	-
Oct. 31.....	699.62	1,463,500	+1,900	639.28	528,600	-3,000	502.37	121,100	-7,300
Nov. 30.....	705.20	1,587,500	+124,000	639.48	531,100	+2,500	500.64	111,700	-9,400
Dec. 31.....	694.44	1,352,600	-234,900	638.13	514,600	-16,500	500.42	110,500	-1,200
CAL YR 1985	-	-	-179,500	-	-	-31,600	-	-	+ 400
Jan. 31.....	686.64	1,193,000	-159,600	637.43	506,200	-8,400	499.73	106,900	-3,600
Feb. 28.....	708.60	1,665,200	+472,200	643.50	581,600	+75,400	499.65	106,500	-400
Mar. 31.....	715.57	1,830,000	+164,800	646.80	624,900	+43,300	499.92	107,900	+1,400
Apr. 30.....	711.43	1,731,200	-98,800	645.85	612,300	-12,600	504.38	133,000	+25,100
May 31.....	712.08	1,746,600	+15,400	647.41	633,100	+20,800	504.10	131,200	-1,800
June 30.....	711.27	1,727,500	-19,100	646.49	620,800	-12,300	504.48	133,600	+2,400
July 31.....	706.85	1,625,000	-102,500	641.87	560,800	-60,000	504.36	132,700	-900
Aug. 31.....	700.61	1,485,200	-139,800	638.40	517,900	-42,900	503.94	130,300	-2,400
Sept. 30.....	698.25	1,433,800	-51,400	637.75	510,000	-7,900	504.20	131,900	+1,600
WTR YR 1986	-	-	-27,800	-	-	-21,600	-	-	+3,500



## RESERVOIRS IN CUMBERLAND RIVER BASIN--Continued

03422000 GREAT FALLS LAKE.--Lat 35°48'21", long 85°38'09", Warren County, Hydrologic Unit 05130108, at penstock inlet on Collins River, 700 ft southwest of powerhouse of Tennessee Valley Authority, 1.5 mi northwest of Rock Island, 1.8 mi upstream from mouth of Collins River, and 2.0 mi upstream from Great Falls Dam on Caney Fork. DRAINAGE AREA, 1,677 mi<sup>2</sup>. PERIOD OF RECORD, January 1917 to current year. GAGE, remote indicator gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REVISIONS.--WSP 2110: Drainage area.

REMARKS.--Reservoir is formed by concrete gravity dam. Spillway is equipped with 18 taintor gates, each 14 ft high by 25 ft wide. Closure of dam was made in 1916; dam redesigned and crest raised 35 ft in 1925. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 805.3 ft top of gates, is 25,900 cfs-days, of which 18,700 cfs-days are controlled storage above elevation 780.0 ft, normal minimum pool. Contents of 1,500 cfs-days below elevation 762.0 ft is dead storage. Reservoir is used primarily for power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum midnight elevation, 817.48 ft, Mar. 23, 1929, contents not determined; minimum midnight contents, 1,700 cfs-days, Aug. 19, 1918, elevation, 756.3 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 26,600 cfs-days, Sept. 5, elevation, 806.45 ft; minimum, 10,300 cfs-days, Dec. 20, elevation, 785.66 ft.

03424000 CENTER HILL LAKE.--Lat 36°05'48", long 85°49'38", DeKalb County, Hydrologic Unit 05130108, at Center Hill Dam on Caney Fork, 10 mi north of Smithville, 14 mi southeast of Carthage, and at mile 26.6. DRAINAGE AREA, 2,174 mi<sup>2</sup>. PERIOD OF RECORD, October 1948 to current year. Prior to October 1965, published as Center Hill Reservoir. GAGE, water-stage recorder. Datum of gage is Sandy Hook datum. Prior to Mar. 14, 1949, nonrecording gage at site 1,320 ft upstream at same datum.

REVISIONS.--WSP 1910: Drainage area.

REMARKS.--Reservoir is formed by earth embankment and concrete gravity dam. Spillway is equipped with eight taintor gates, each 37 ft high by 50 ft wide. Closure of dam was made Nov. 27, 1948; water in reservoir first reached minimum pool elevation Jan. 11, 1949. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 685.0 ft, top of gates, is 1,054,800 cfs-days, of which 384,500 cfs-days between 685.0 ft and 648.0 ft, crest of spillway, are reserved for flood control, and 248,000 cfs-days between elevations 648.0 ft and 618.0 ft, ordinary minimum pool, are used for power production. Contents of 422,300 cfs-days below 618.0 ft is dead storage. Reservoir is used for flood control, navigation, and power.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,014,600 cfs-days, May 10, 1984, elevation, 681.52 ft; minimum, after first filling, 171,000 cfs-days, Dec. 1, 2, 1949, elevation, 576.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 628,600 cfs-days, June 9, elevation, 643.39 ft; minimum, 479,100 cfs-days, Feb. 4, elevation, 625.49 ft.

03426300 OLD HICKORY LAKE.--Lat 36°17'50", long 86°39'20", Sumner County, Hydrologic Unit 05130201, at Old Hickory Dam on Cumberland River, 2.0 mi west of Hendersonville, 10 mi northeast of the State Capitol in Nashville, and at mile 216.2. DRAINAGE AREA, 11,673 mi<sup>2</sup>. PERIOD OF RECORD, June 1954 to current year. GAGE, water-stage recorder. Datum of gage is 408.5 ft National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations NGVD. Prior to Apr. 4, 1957, nonrecording gage at same site and datum.

REVISIONS.--WSP 2110: Drainage area.

REMARKS.--Reservoir is formed by concrete gravity dam with earth embankment. Spillway is equipped with six taintor gates, each 41 ft high and 45 ft wide. Closure of dam was made in June 1954 and water in reservoir was raised sufficiently to maintain navigation through the lock. Water in reservoir first reached ordinary minimum pool elevation Dec. 30, 1956. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 450.0 ft, maximum surcharge pool, 274,600 cfs-days of which 63,000 cfs-days between elevations 450.0 ft and 445.0 ft, normal pool, are induced surcharge storage provided to compensate for loss of natural valley storage incurred by construction of the project, and 31,800 cfs-days between elevations 445.0 ft and 442.0 ft, ordinary minimum pool, are used for power production. Contents of 179,800 cfs-days below elevation 442.0 ft, is dead storage. Reservoir is used for navigation and power.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 277,200 cfs-days, May 9, 1984, elevation, 450.18 ft; minimum, after first filling to ordinary minimum pool, 179,400 cfs-days, Oct. 22, 1957, Oct. 28, 1969, elevation, 441.96 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 216,000 cfs-days, Feb. 20, elevation, 445.38 ft; minimum, 186,600 cfs-days, Oct. 29, elevation, 442.68 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
	03422000	GREAT FALLS LAKE		03424000	CENTER HILL LAKE		03426300	OLD HICKORY LAKE	
Sept. 30.....	797.95	19,000	-	633.22	541,300	-	444.27	203,500	-
Oct. 31.....	789.82	12,800	-6,200	631.77	529,300	-12,000	443.27	192,700	-10,800
Nov. 30.....	805.71	26,300	+13,500	635.10	556,900	+27,600	444.14	202,000	+9,300
Dec. 31.....	787.56	11,400	-14,900	626.16	484,400	-72,500	444.45	205,400	+3,400
CAL YR 1985	-	-	-14,100	-	-	-41,100	-	-	-5,100
Jan. 31.....	789.10	12,400	+1,000	625.70	480,800	-3,600	444.51	206,100	+700
Feb. 28.....	804.00	24,000	+11,600	641.80	614,500	+133,700	444.13	201,900	-4,200
Mar. 31.....	793.39	15,200	-8,800	639.57	595,100	-19,400	444.24	203,100	+1,200
Apr. 30.....	791.47	13,500	-1,700	639.19	591,800	-3,300	444.51	206,100	+3,000
May 31.....	802.60	22,700	+9,200	641.14	608,700	+16,900	444.24	203,200	-2,900
June 30.....	797.73	18,600	-4,100	641.83	614,800	+6,100	444.42	205,100	+1,900
July 31.....	799.48	20,000	+1,400	637.33	575,800	-39,000	444.82	209,600	+4,500
Aug. 31.....	800.31	20,700	+700	632.73	537,200	-38,600	444.46	205,600	-4,000
Sept. 30.....	799.16	19,800	-900	631.81	529,700	-7,500	444.46	205,600	0
WTR YR 1986	-	-	+800	-	-	-11,600	-	-	+2,100

## CUMBERLAND RIVER BASIN

## RESERVOIRS IN CUMBERLAND RIVER BASIN--Continued

03430050 J. PERCY PRIEST RESERVOIR.--Lat 36°09'23", long 86°37'07", Davidson County, Hydrologic Unit 05130203, on upstream face of J. Percy Priest Dam on Stones River, 2.6 mi east of Donelson, and 6.8 mi above mouth. DRAINAGE AREA, 892 mi<sup>2</sup>. PERIOD OF RECORD, September 1967 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Dec. 15, 1967, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete gravity dam with earth embankments. Spillway is equipped with four taintor gates, each 41 ft high by 45 ft wide. Closure of dam was made Sept. 18, 1967; water in reservoir first reached ordinary minimum pool May 15, 1968. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 504.5 ft, maximum controlled pool, is 328,700 cfs-days of which 193,600 cfs-days is controlled storage between elevations 504.5 ft and 480.0 ft, ordinary minimum pool. Contents of 17,200 cfs-days between elevations 480.0 ft and 483.0 ft, full winter pool, is available for power production. Contents of 176,400 cfs-days above 483.0 ft is available for flood control during the winter, and 131,100 cfs-days above 490.0 ft, full pool during spring-to-fall season, is available for flood control the rest of the year. Contents of 135,100 cfs-days below elevation 480.0 ft is dead storage. Reservoir is used for flood control, power, recreation, and wildlife.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 336,600 cfs-days, May 9, 1984, elevation, 505.18 ft; minimum, after first filling to ordinary minimum pool, 109,500 cfs-days, Dec. 5, 1968, elevation, 474.75 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 258,300 cfs-days, Sept. 5, elevation, 497.62 ft; minimum, 145,600 cfs-days, Jan. 31, elevation, 481.86 ft.

03434900 CHEATHAM LAKE.--Lat 36°18'56", long 87°13'10", Cheatham County, Hydrologic Unit 05130202, at Cheatham Dam on Cumberland River, 9.4 mi west of Ashland City, 16 mi southeast of the courthouse in Clarksville, and at mile 148.7. DRAINAGE AREA, 14,159 mi<sup>2</sup>.

REMARKS.--Reservoir is formed by concrete gravity dam. Spillway is equipped with seven semi-submersible taintor gates, each 27 ft high by 60 ft wide. Total capacity at elevation 385.0 ft, normal pool, is 52,200 cfs-days, of which 9,800 cfs-days are controlled storage. Records of contents not published herein.

03438210 LAKE BARKLEY.--Lat 37°01'17", long 88°13'16", Lyon County, KY, Hydrologic Unit 05130205, in powerhouse of Barkley Dam on Cumberland River, 1.4 mi northeast of Grand Rivers, KY, and at mile 30.6. DRAINAGE AREA, 17,598 mi<sup>2</sup>. PERIOD OF RECORD, July 1964 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929, (levels by U.S. Army Corps of Engineers). Prior to Jan. 1, 1966, nonrecording gage, 1,200 ft upstream from Barkley Dam at same datum.

REMARKS.--Reservoir is formed by concrete gravity dam with earth embankments. Spillway is equipped with 12 taintor gates, each 50 ft high by 55 ft wide. Construction cofferdam was closed and limited storage began July 1, 1964; reservoir reached ordinary minimum pool elevation of 354.0 ft Feb. 16, 1966. Total level pool capacity at elevation 375.0 ft, top of gates, is 1,049,600 cfs-days, of which 742,000 cfs-days is controlled storage above 354.0 ft, ordinary minimum pool. Contents of 130,500 cfs-days between ordinary minimum pool elevation, 354.0 ft, and full pool elevation, 359.0 ft, is available for power during the spring-to-fall season. Minimum pool elevation in advance of floods is 346.0 ft, contents 171,000 cfs-days. Reservoir is used for navigation, flood control, power, and recreation. Barkley-Kentucky Canal opened June 13, 1966, for navigation and power use. Canal is 1.75 mi long and interconnects Lake Barkley and Kentucky Lake at a point 2.2 mi upstream from Barkley Dam. For daily discharges through the canal, see station 03438190, Kentucky reports.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 370.04 ft, May 13, 1984; minimum after reaching permanent pool elevation, 353.20 ft, Dec. 20, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 470,800 cfs-days, June 9, elevation, 360.10 ft; minimum contents, 302,400 cfs-days, Dec. 11, minimum elevation, 353.77 ft. Contents based on backwater profile.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
03430050 J. PERCY PRIEST LAKE				03438210 LAKE BARKLEY†		
Sept. 30.....	489.65	195,100	-	354.09	309,600	-
Oct. 31.....	487.77	182,100	-13,000	355.29	338,000	+28,400
Nov. 30.....	484.09	158,800	-23,300	354.80	326,200	-11,800
Dec. 31.....	481.98	146,300	-12,500	354.34	315,400	-10,800
CAL YR 1985	-	-	-3,800	-	-	-24,400
Jan. 31.....	481.89	145,700	-600	354.61	321,700	+6,300
Feb. 28.....	482.73	150,700	+5,000	354.22	312,600	-9,100
Mar. 31.....	486.20	171,900	+21,200	355.32	338,800	+26,200
Apr. 30.....	486.95	176,700	+4,800	358.45	422,200	+83,400
May 31.....	489.28	192,500	+15,800	359.29	446,600	+24,400
June 30.....	490.03	197,800	+5,300	359.08	440,400	-6,200
July 31.....	490.05	198,000	+200	357.63	399,200	-41,200
Aug. 31.....	490.13	198,600	+600	356.51	369,100	-30,100
Sept. 30.....	490.12	198,500	-100	355.54	344,200	-24,900
WTR YR 1986	-	-	+3,400	-	-	+34,600

† Contents based on backwater profile.

## 03455000 FRENCH BROAD RIVER NEAR NEWPORT, TN

LOCATION.--Lat 35°58'54", long 83°09'40", Cocke County, Hydrologic Unit 06010105, on left bank, 200 ft upstream from bridge on U.S. Highway 411, 1.0 mi northeast of Newport city limits, 3.7 mi upstream from Pigeon River, and at mile 77.5.

DRAINAGE AREA.--1,858 mi<sup>2</sup>.

PERIOD OF RECORD.--September to December 1900, February to August 1901, October to November 1901, November 1902 to December 1905, September to December 1907, October 1920 to current year. Monthly discharge only October to November 1920, published in WSP 1306.

REVISED RECORDS.--WSP 783: 1933-34. WSP 823: Drainage area. WSP 893: 1928(M). WSP 1306: 1900-1908. WSP 1336: 1903(M), 1921-22(M), 1923, 1925(M), 1927(M), 1928, 1932. WSP 1706: 1901(M).

GAGE.--Water-stage recorder. Datum of gage is 1,011.61 ft above National Geodetic Vertical Datum of 1929. See WSP 1910 for history of changes prior to Mar. 31, 1934.

REMARKS.--Estimated daily discharge: Oct. 30 to Nov. 12 and July 16-24. Records good. Diurnal fluctuation during low flow caused by powerplants above station. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--68 years (water years 1904-05, 1921-86), 2,958 ft<sup>3</sup>/s, 21.62 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,300 ft<sup>3</sup>/s, Aug. 30, 1940, gage height, 19.25 ft; minimum, 208 ft<sup>3</sup>/s, Oct. 23, 1952, gage height, 0.97 ft; minimum daily, 240 ft<sup>3</sup>/s, Sept. 9, 1925; minimum gage height, 0.86 ft, Aug. 4, 1986.

EXTREMES OUTSIDE PERIOD OF RECORD.--From reports of Tennessee Valley Authority, the flood of Mar. 7, 1867, gage height, 24 ft, present datum, discharge, estimated, 110,000 ft<sup>3</sup>/s, has not been exceeded since that date. From the same reports, other outstanding floods occurred Feb. 28, 1902, gage height, 23.0 ft present datum, discharge, estimated, 101,000 ft<sup>3</sup>/s; and July 17, 1916, gage height, 22.5 ft, present datum, discharge, estimated, 97,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Dec. 1	0530	*7,480	*5.03				

Minimum discharge, 307 ft<sup>3</sup>/s, Aug. 4; minimum daily, 339 ft<sup>3</sup>/s, Aug. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	849	4300	6890	1550	1460	2590	1660	1020	1860	827	468	636
2	871	6700	5930	1640	1450	2170	1650	989	1540	936	440	778
3	1060	5800	4510	1600	1620	1990	1540	982	1480	1220	405	2330
4	1540	5600	3490	1510	1750	1860	1460	960	1670	1110	339	2340
5	1500	4800	3000	1490	1740	1770	1480	948	1400	939	521	1870
6	1120	3800	2770	1420	1760	1710	1460	905	1420	788	585	2010
7	972	3100	2550	1380	1760	1660	1460	911	1540	675	688	1420
8	927	2700	2370	1370	1760	1590	1490	988	1460	636	818	1110
9	838	2300	2240	1240	1680	1530	1700	974	1450	685	693	961
10	927	2200	2140	1280	1570	1490	1490	985	1590	588	553	890
11	838	2100	2040	1390	1570	1490	1470	901	2560	804	718	874
12	849	2000	2210	1340	1550	1560	1370	910	1850	803	783	867
13	838	1870	2400	1300	1510	1670	1340	874	2030	818	633	940
14	827	1780	2470	1280	1400	3720	1390	1170	1460	851	807	862
15	838	1720	2350	1340	1460	5780	1230	1340	1260	808	797	812
16	882	1650	1940	1260	1450	4600	1270	1060	1190	615	692	696
17	849	1620	1990	1340	1740	3650	1290	1340	1050	600	816	651
18	838	1710	1920	1270	5020	2980	1310	1480	1030	580	3400	615
19	816	1640	1830	1280	4620	2800	1270	1390	940	550	2560	683
20	827	1540	1770	1790	3570	3640	1230	1310	864	530	1740	584
21	838	1550	1740	1900	2780	3560	1270	1400	867	490	1280	699
22	1040	2930	1610	1640	2400	2930	1420	1550	821	450	1000	705
23	1160	5040	1680	1580	2170	2620	1510	1420	785	410	954	774
24	1280	3840	1730	1520	2010	2400	1210	2210	761	450	978	731
25	1120	2930	1670	1410	1960	2240	1210	2080	710	632	991	731
26	1060	2520	1470	1510	1830	2110	1170	2050	713	639	839	660
27	1040	2260	1340	1630	2320	2020	1160	1930	728	698	693	683
28	961	2240	1540	1260	3290	1940	1140	3720	676	1010	795	653
29	938	2590	1550	1170	---	1840	1170	3510	750	774	941	596
30	950	3240	1490	1580	---	1750	1030	2640	737	592	752	587
31	1300	---	1470	1600	---	1710	---	2100	---	548	620	---
TOTAL	30693	88070	74100	44870	59200	75370	40850	46047	37192	22056	28299	28748
MEAN	990	2936	2390	1447	2114	2431	1362	1485	1240	711	913	958
MAX	1540	6700	6890	1900	5020	5780	1700	3720	2560	1220	3400	2340
MIN	816	1540	1340	1170	1400	1490	1030	874	676	410	339	584
CFSM	.53	1.58	1.29	.78	1.14	1.31	.73	.80	.67	.38	.49	.52
IN.	.61	1.76	1.48	.90	1.19	1.51	.82	.92	.74	.44	.57	.58

CAL YR 1985	TOTAL	739045	MEAN	2025	MAX	12100	MIN	710	CFSM	1.09	IN.	14.80
WTR YR 1986	TOTAL	575495	MEAN	1577	MAX	6890	MIN	339	CFSM	.85	IN.	11.52



## TENNESSEE RIVER BASIN

03461200 COSBY CREEK ABOVE COSBY, TN

LOCATION.--Lat 35°46'58", long 83°13'03", Cocke County, Hydrologic Unit 06010106, in Great Smoky Mountains National Park on left retaining wall of creek, 400 ft downstream from Crying Creek, 600 ft upstream from bridge on State Highway 32, 3,600 ft upstream from Stillhouse Branch, 2.4 mi southeast of Cosby, and at mile 10.7.

DRAINAGE AREA.--10.1 mi<sup>2</sup>.

PERIOD OF RECORD.--Annual maximum, water years 1959-66 (1959-65 published as "near Cosby"); October 1966 to current year.

REVISED RECORD.--WDR TN-82-1: 1977-78(M)(P), 1979, 1980-81(M)(P).

GAGE.--Water-stage recorder and crest stage gage. Datum of gage is 1,644.07 ft above National Geodetic Vertical Datum of 1929. Oct. 15, 1958, to Sept. 30, 1966, crest-stage gage at site 600 ft downstream, at datum 1.08 ft lower (gage heights adjusted to present datum in WSP 2110). Oct. 1, 1966 to June 13, 1977, water-stage recorder at site 600 ft downstream at present datum.

REMARKS.--Estimated daily discharges: Dec. 25-27; Jan. 28, 29. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--20 years, 27.3 ft<sup>3</sup>/s, 36.71 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,720 ft<sup>3</sup>/s, Mar. 16, 1973, gage height, 4.11 ft former site; about 17.1 ft present site; minimum, 1.4 ft<sup>3</sup>/s, Sept. 30, Oct. 1, 2, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Mar. 13	1400	*407	*14.75	No other peak greater than base discharge.			

Minimum discharge, 2.5 ft<sup>3</sup>/s, Aug. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	4.6	4.6	58	14	10	39	14	10	11	5.7	3.5	11	
2	5.1	6.8	45	13	12	35	14	9.7	10	19	3.3	28	
3	5.1	7.9	34	14	22	32	13	9.3	9.4	25	3.1	95	
4	5.0	27	27	13	28	28	13	9.0	8.5	11	2.9	60	
5	4.5	27	23	13	33	26	12	8.6	8.0	8.8	2.7	40	
6	4.3	31	20	13	31	24	12	8.3	8.2	7.5	3.2	27	
7	4.2	40	17	12	28	21	12	8.0	8.3	6.6	4.1	20	
8	4.1	34	16	11	23	20	13	8.2	8.4	5.9	4.7	16	
9	3.9	24	14	12	20	19	13	7.3	20	5.4	3.3	14	
10	4.0	19	14	11	18	29	11	6.9	30	38	3.0	12	
11	4.0	18	14	11	18	59	11	6.7	30	37	4.9	11	
12	3.8	17	26	11	15	47	11	6.6	19	24	5.7	17	
13	3.7	14	23	10	14	142	10	7.5	15	18	3.9	12	
14	3.8	13	22	9.8	15	132	9.8	7.3	13	16	6.9	11	
15	4.0	11	20	9.6	14	134	9.7	7.1	12	13	4.0	9.6	
16	5.7	11	18	9.4	14	82	9.5	6.2	11	11	19	9.9	
17	4.7	11	17	9.4	66	60	9.7	8.6	9.6	9.5	54	9.0	
18	4.2	10	16	9.4	114	47	9.3	10	8.8	8.5	45	8.2	
19	4.0	9.8	15	13	72	44	9.5	8.3	8.2	7.7	27	7.6	
20	3.8	9.4	14	12	53	37	9.4	9.4	7.6	6.9	20	7.5	
21	5.8	11	14	10	42	33	17	8.2	7.1	6.3	14	16	
22	6.6	17	13	11	36	28	20	7.4	6.5	6.8	11	12	
23	5.8	18	13	11	31	25	16	17	6.1	6.8	9.5	10	
24	5.4	16	13	11	27	23	14	17	5.8	5.6	8.9	9.1	
25	5.8	14	12	11	23	21	14	23	5.4	5.8	7.8	8.4	
26	5.2	13	12	12	21	20	14	19	5.0	4.9	6.9	7.9	
27	4.9	12	11	11	44	19	12	19	4.7	4.6	6.9	7.3	
28	4.8	22	11	10	45	18	12	17	5.2	5.5	15	6.5	
29	4.6	52	10	10	---	17	12	16	6.4	4.5	15	6.2	
30	4.6	57	9.9	10	---	15	11	15	7.2	3.9	11	6.0	
31	4.5	---	12	9.7	---	14	---	13	---	3.6	9.8	---	
TOTAL	144.5	577.5	583.9	347.3	889	1290	367.9	334.6	315.4	342.8	340.0	515.2	
MEAN	4.66	19.2	18.8	11.2	31.8	41.6	12.3	10.8	10.5	11.1	11.0	17.2	
MAX	6.6	57	58	14	114	142	20	23	30	38	54	95	
MIN	3.7	4.6	9.9	9.4	10	14	9.3	6.2	4.7	3.6	2.7	6.0	
CFSM	.46	1.90	1.86	1.11	3.15	4.12	1.22	1.07	1.04	1.10	1.09	1.70	
IN.	.53	2.13	2.15	1.28	3.27	4.75	1.36	1.23	1.16	1.26	1.25	1.90	
CAL YR 1985	TOTAL	6569.8		MEAN	18.0	MAX	411	MIN	3.4	CFSM	1.78	IN.	24.20
WTR YR 1986	TOTAL	6048.1		MEAN	16.6	MAX	142	MIN	2.7	CFSM	1.64	IN.	22.28



## 03465500 NOLICHUCKY RIVER AT EMBREEVILLE, TN

LOCATION.--Lat 36°10'35", long 82°27'27", Washington County, Hydrologic Unit 06010108, on left bank, at Embreeville, 1,000 ft upstream from bridge on State Highway 81, 3 mi northwest of Erwin, 5.2 mi downstream from North Indian Creek, and at mile 89.0.

DRAINAGE AREA.--805 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1900 to May 1901 (published as "near Chucky Valley"), October 1919 to current year. Monthly discharge only October 1919 to June 1920, published in WSP 1306.

REVISED RECORDS.--WSP 803: 1935(M). WSP 823: Drainage area. WSP 1336: 1921-24, 1931(M).

GAGE.--Water-stage recorder. Datum of gage is 1,519.30 ft above National Geodetic Vertical Datum of 1929. Sept. 1, 1900 to May 21, 1901, nonrecording gage at site 3 mi downstream at different datum, destroyed by flood of May 21, 1901. July 1, 1920 to Sept. 30, 1931, nonrecording gage at bridge 2,000 ft downstream at datum 6.33 ft lower.

REMARKS.--Estimated daily discharge: Mar. 3. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--67 years (water years 1920-86), 1,359 ft<sup>3</sup>/s, 22.93 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 110,000 ft<sup>3</sup>/s, Nov. 6, 1977, gage height, 21.52 ft, from rating curve extended above 48,000 ft<sup>3</sup>/s on basis of contracted-opening and slope-area measurements of peak flow; minimum, 85 ft<sup>3</sup>/s, Sept. 8, 9, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 21, 1901, reached a stage of 24 ft, discharge, 120,000 ft<sup>3</sup>/s, present site and datum, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Nov. 1	2100	*10,600	*5.31	No other peak greater than base discharge.			
Minimum discharge, 182 ft <sup>3</sup> /s, July 22, Aug. 6.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	326	5930	3950	871	778	1480	870	520	662	316	241	444	
2	386	6420	2810	730	827	1300	839	511	614	778	221	1040	
3	634	2900	2180	765	1000	1200	818	492	581	850	205	2050	
4	911	2930	1830	712	1070	1190	786	480	532	529	197	1920	
5	698	6280	1620	695	1080	1100	766	476	525	393	216	1400	
6	477	3590	1480	621	1100	1040	749	474	575	334	197	1110	
7	413	3050	1330	643	1080	991	775	472	653	305	218	807	
8	384	2440	1230	599	1070	904	795	520	596	284	283	643	
9	371	1970	1150	548	925	865	899	501	574	264	290	551	
10	366	1660	1080	616	870	893	806	463	552	281	229	501	
11	358	1470	1030	653	882	962	728	455	668	367	217	457	
12	352	1340	1090	603	853	995	696	563	582	545	246	439	
13	342	1230	1280	625	763	1140	676	547	506	401	303	449	
14	344	1130	1370	542	692	2720	662	718	459	408	257	415	
15	355	1030	1210	565	768	4350	650	650	431	384	258	368	
16	363	964	1120	584	764	3150	647	538	418	336	316	354	
17	348	958	1080	603	1100	2310	663	692	392	293	393	337	
18	330	910	1030	605	4100	1880	658	691	376	266	470	314	
19	326	844	950	743	3440	1910	632	647	354	239	802	312	
20	328	799	907	1200	2670	2470	615	865	342	219	601	317	
21	346	845	892	829	2170	1900	695	820	332	204	872	340	
22	464	2030	770	776	1820	1630	760	654	315	194	652	336	
23	429	2590	941	824	1590	1470	691	620	302	303	717	324	
24	384	1820	946	782	1400	1350	636	850	299	341	542	290	
25	372	1490	894	735	1320	1230	612	1000	305	412	443	286	
26	363	1300	727	784	1190	1150	601	998	285	405	349	275	
27	344	1200	669	746	1450	1120	584	874	269	509	327	268	
28	337	1180	794	565	1740	1060	556	1310	263	1050	1130	257	
29	328	1580	731	561	---	987	549	1020	279	500	883	247	
30	317	2650	693	874	---	942	542	838	300	355	554	248	
31	421	---	691	786	---	909	---	736	---	280	421	---	
TOTAL	12517	64530	38475	21785	38512	46598	20956	20995	13341	12345	13050	17099	
MEAN	404	2151	1241	703	1375	1503	699	677	445	398	421	570	
MAX	911	6420	3950	1200	4100	4350	899	1310	668	1050	1130	2050	
MIN	317	799	669	542	692	865	542	455	263	194	197	247	
CFSM	.50	2.67	1.54	.87	1.71	1.87	.87	.84	.55	.49	.52	.71	
IN.	.58	2.98	1.78	1.01	1.78	2.15	.97	.97	.62	.57	.60	.79	
CAL YR 1985	TOTAL	402691		MEAN	1103	MAX	7320	MIN	198	CFSM	1.37	IN.	18.61
WTR YR 1986	TOTAL	320203		MEAN	877	MAX	6420	MIN	194	CFSM	1.09	IN.	14.80

## TENNESSEE RIVER BASIN

03466228 SINKING CREEK AT AFTON, TN

LOCATION.--Lat 36°11'55", long 82°44'31", Greene County, Hydrologic Unit 06010108, on left bank 300 ft upstream from bridge on county road, 0.4 mi northwest of Afton, and at mile 3.1.

DRAINAGE AREA.--13.7 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1977 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,459.36 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharge: Jan. 28. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--9 years, 12.4 ft<sup>3</sup>/s, 12.29 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,510 ft<sup>3</sup>/s, July 21, 1979, gage height, 7.79 ft, from rating curve extended above 100 ft<sup>3</sup>/s on basis of area-velocity study; minimum, 1.7 ft<sup>3</sup>/s, several days in December 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 180 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
May 19	2200	*97	*2.61				

Minimum discharge, 1.9 ft<sup>3</sup>/s, July 30, Sept. 19, 20, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	3.4	2.8	17	5.6	6.7	18	9.5	5.6	7.2	4.4	2.3	3.3	
2	3.4	2.8	11	5.4	7.1	17	9.4	5.6	7.2	4.4	2.3	3.4	
3	3.4	2.8	9.0	5.4	7.1	16	9.4	5.2	15	4.0	2.4	3.5	
4	3.3	5.6	8.1	5.4	7.1	15	9.4	4.8	7.8	3.8	2.4	3.5	
5	3.2	7.9	7.4	5.2	8.5	14	9.2	4.8	7.0	3.7	2.4	3.8	
6	3.0	4.8	6.7	4.8	11	14	9.0	4.8	6.8	3.6	2.2	3.2	
7	3.0	4.0	6.5	4.8	9.4	13	9.0	4.8	6.5	3.2	2.6	3.0	
8	2.9	3.8	6.0	4.6	8.4	12	9.8	4.8	5.9	3.2	2.5	2.8	
9	2.8	3.6	5.8	4.3	7.7	12	9.3	4.7	5.6	3.1	2.5	2.7	
10	2.8	3.0	5.6	4.3	7.4	12	8.7	4.6	5.6	3.3	2.3	2.6	
11	2.8	3.0	4.8	4.3	8.8	12	8.4	4.6	5.6	3.3	2.7	2.6	
12	2.9	3.0	7.6	4.3	9.0	12	8.1	4.8	5.3	3.0	2.9	2.6	
13	2.8	3.0	7.7	4.3	8.3	13	8.0	4.3	5.1	3.0	2.6	2.6	
14	2.8	3.0	7.3	4.2	8.0	18	8.0	4.3	5.1	3.0	2.3	2.6	
15	3.0	3.0	6.2	4.1	8.0	26	8.0	4.3	5.1	2.9	2.3	2.5	
16	2.9	3.0	5.8	4.2	8.6	18	7.6	4.6	5.0	2.7	2.3	2.1	
17	2.8	3.7	5.6	4.3	34	15	7.4	6.3	4.5	2.6	4.8	2.1	
18	2.8	3.4	5.4	4.3	45	14	7.4	4.6	4.5	2.5	3.7	2.1	
19	2.8	3.1	4.9	4.3	28	16	7.2	24	4.3	2.4	2.9	2.0	
20	2.8	3.0	4.8	4.3	32	15	7.1	29	4.3	2.4	2.6	2.1	
21	3.7	2.9	4.8	4.3	19	13	7.1	10	4.3	2.7	2.6	2.5	
22	3.9	8.1	4.6	4.3	18	12	7.0	7.6	4.3	2.6	2.5	2.6	
23	3.2	5.6	4.8	4.3	19	12	6.5	9.9	4.1	2.6	2.6	2.3	
24	3.2	4.4	4.8	4.3	17	12	6.5	16	4.1	2.7	2.4	2.1	
25	3.2	3.9	4.7	4.3	16	10	6.4	37	4.1	2.7	2.3	2.1	
26	3.1	3.7	4.1	5.6	16	10	6.5	14	3.9	2.7	2.4	2.1	
27	2.8	5.9	4.1	6.6	22	10	6.5	12	3.7	2.6	3.8	2.1	
28	2.8	9.2	4.1	6.0	21	10	6.5	10	3.9	2.6	5.1	2.1	
29	2.8	14	4.1	5.9	---	10	5.9	9.4	4.4	2.3	3.5	1.9	
30	2.8	44	4.1	5.9	---	10	5.5	8.4	3.9	2.2	2.8	2.1	
31	2.8	---	4.3	6.0	---	9.7	---	7.9	---	2.4	2.8	---	
TOTAL	93.9	174.0	191.7	149.9	418.1	420.7	234.3	282.7	164.1	92.6	85.8	77.0	
MEAN	3.03	5.80	6.18	4.84	14.9	13.6	7.81	9.12	5.47	2.99	2.77	2.57	
MAX	3.9	44	17	6.6	45	26	9.8	37	15	4.4	5.1	3.8	
MIN	2.8	2.8	4.1	4.1	6.7	9.7	5.5	4.3	3.7	2.2	2.2	1.9	
CFSM	.22	.42	.45	.35	1.09	.99	.57	.67	.40	.22	.20	.19	
IN.	.25	.47	.52	.41	1.14	1.14	.64	.77	.45	.25	.23	.21	
CAL YR 1985	TOTAL	3108.0		MEAN	8.52	MAX	187	MIN	2.8	CFSM	.62	IN.	8.44
WTR YR 1986	TOTAL	2384.8		MEAN	6.53	MAX	45	MIN	1.9	CFSM	.48	IN.	6.48

TENNESSEE RIVER BASIN

95

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN  
(National stream-quality accounting network station)

LOCATION.--Lat 35°57'30", long 83°46'26", Knox County, Hydrologic Unit 06010107, on left bank, 0.7 mi downstream from Johnson Hollow, 7.5 mi upstream from confluence with Holston River, and 8 mi east of Knoxville.

DRAINAGE AREA.--5,101 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year. Prior to December 1945 monthly discharge only, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Dec. 10, 1945, to Sept. 30, 1957, at site 200 ft upstream on right bank at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Douglas Lake (station 03468500), 24.6 mi upstream.

AVERAGE DISCHARGE.--41 years, 7,750 ft<sup>3</sup>/s, 20.63 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,600 ft<sup>3</sup>/s, May 8, 1984, elevation, 834.60 ft; minimum, 67 ft<sup>3</sup>/s, Oct. 25, 1953, elevation, 813.38 ft; minimum daily, 68 ft<sup>3</sup>/s, Oct. 23-26, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1867 reached a stage of 855.0 ft, from floodmarks, estimated discharge, 160,000 ft<sup>3</sup>/s, from investigations by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,800 ft<sup>3</sup>/s, June 24, elevation, 821.90 ft; minimum, 286 ft<sup>3</sup>/s, Sept. 8; elevation, 814.67 ft; minimum daily, 353 ft<sup>3</sup>/s, Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7040	1440	4220	1670	1230	7160	1710	2460	3320	3440	3270	2410
2	7000	1840	10600	3010	1560	3730	2130	2020	4930	3400	2720	4160
3	2000	2360	12400	2740	1610	4890	2370	1810	3070	2900	2080	5630
4	3760	2270	11800	1610	1830	8510	1080	1800	2590	1780	2190	3860
5	2340	3970	11100	2550	1800	8780	2750	1530	2200	2180	2740	4810
6	2410	2920	11700	5140	5220	7420	2720	1640	2150	1990	2790	2380
7	6460	2570	12300	4090	2730	7760	2790	2000	2000	5080	1240	353
8	3890	3800	11400	5050	2590	4460	1880	2140	1930	6240	2310	1600
9	3320	2650	11900	6000	1360	1050	3010	1640	3120	4580	1340	3040
10	2910	2180	12300	2980	2490	3710	2460	2090	2030	5300	1200	4170
11	4280	5870	12500	1790	7510	7510	2380	1840	2660	4910	1660	5940
12	2560	8510	12700	1460	8810	6990	2510	1620	2640	3730	1810	5890
13	2100	5310	13700	2460	8530	6130	2430	1950	3400	2590	1600	2980
14	2840	3680	15500	4060	6090	2890	1940	2020	2400	3220	3030	692
15	3000	3650	15800	2080	4180	4150	1790	2080	2090	2130	5120	1640
16	7390	3180	16600	2150	2320	3120	2050	2440	4260	3710	2550	4230
17	5990	1880	14100	2460	1870	2470	2870	2420	4420	3550	1670	5880
18	5980	5970	13500	1500	5290	3090	3580	1790	3790	4210	4350	5390
19	4440	7090	14400	1430	2390	3710	1240	2290	2410	2820	3610	3640
20	2300	7720	10300	2510	1470	5690	2110	2430	3300	1860	2540	1690
21	4010	7700	6930	3500	1080	10500	2160	2100	3090	3060	1620	1420
22	5350	7800	1680	2450	2130	8080	2310	1580	1940	4380	2830	1860
23	2610	4790	1550	5220	1700	3460	2900	2710	5280	4660	1790	5790
24	3000	2960	1030	2420	3660	3040	2220	2280	7430	4700	1590	9090
25	2340	4710	5340	2240	5830	2570	1470	2600	5270	7090	2920	10000
26	2200	5930	7210	1620	5960	2050	2200	2540	2320	5420	4190	5220
27	1900	4290	3250	6690	3610	1880	2220	2500	3840	1730	4320	3320
28	2380	4150	3030	9940	4860	1720	1580	2440	3320	2880	4240	2980
29	2440	4680	1820	5220	---	2380	1850	4620	1890	3250	4100	3100
30	2390	5940	2960	3780	---	2130	2340	5220	2250	3520	3340	3040
31	1560	---	1110	2670	---	1660	---	3870	---	3900	1530	---
TOTAL	112190	131810	284730	102490	99710	142690	67050	72470	95340	114210	82290	116205
MEAN	3619	4394	9185	3306	3561	4603	2235	2338	3178	3684	2655	3874
MAX	7390	8510	16600	9940	8810	10500	3580	5220	7430	7090	5120	10000
MIN	1560	1440	1030	1430	1080	1050	1080	1530	1890	1730	1200	353
(+)	-52900	+71800	-115300	-10900	+78400	+67700	+23300	+37900	-20800	-58500	-15900	-48000
MEAN	1913	6787	5465	2955	6361	6787	3012	3560	2485	1797	2142	2274
CFSM	.38	1.33	1.07	.58	1.25	1.33	.59	.70	.49	.35	.42	.45
IN.	.43	1.48	1.24	.67	1.30	1.53	.66	.80	.54	.41	.48	.50

CAL YR 1985 TOTAL 1837360 MEAN 5034 MAX 17400 MIN 286 MEAN+ 5038 CFSM+ 0.99 IN+ 13.41  
WTR YR 1986 TOTAL 1421185 MEAN 3894 MAX 16600 MIN 353 MEAN+ 3775 CFSM+ 0.74 IN+ 10.05

+ Change in contents, in cfs days, in Douglas Lake, furnished by Tennessee Valley Authority.

† Adjusted for change in contents in Douglas Lake.

NOTE.--Contents (cfs-days) for adjustments furnished by Tennessee Valley Authority.



## TENNESSEE RIVER BASIN

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to July 1986 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1975 to September 1981.

WATER TEMPERATURE: June 1975 to September 1981.

REMARKS.--Flow regulated by Douglas Lake (station 03468500), 24.6 mi upstream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 303 microsiemens, June 25, 1978; minimum, 34 microsiemens, Oct. 23, 1978.

WATER TEMPERATURE: Maximum, 33.0°C, Aug. 11, 12, 1977; minimum, 0.0°C, Jan. 19, 1977, Feb. 11, 12, 20, 1979.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--A specific conductance of 310 microsiemens was observed on Dec. 18, 1981.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 16...	1215	1340	185	7.90	21.0	747	5.0	8.4	96	32
JAN 21...	1330	2420	155	7.90	5.0	743	2.7	13.0	104	K3
APR 15...	1000	1440	170	8.20	13.5	738	2.5	11.0	109	21
JUL 22...	1030	1500	190	7.60	24.0	744	4.0	5.8	71	34

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3
OCT 16...	67	56	4	17	3.3	17	39	1	2.4	52
JAN 21...	K3	53	7	16	3.2	11	30	0.7	1.9	46
APR 15...	K9	63	11	19	3.8	10	25	0.6	1.8	52
JUL 22...	110	62	7	19	3.6	14	32	0.8	2.1	55

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
OCT 16...	1.0	19	19	0.2	5.9	127	110	0.17	459	<0.01
JAN 21...	0.9	13	13	0.1	7.5	91	89	0.12	595	0.01
APR 15...	0.6	13	12	0.1	3.3	103	94	0.14	400	0.02
JUL 22...	2.7	16	14	0.1	6.3	110	110	0.15	446	0.02

K--Results based on non-ideal colony count.



TENNESSEE RIVER BASIN

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03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 16...	0.37	--	0.05	0.7	0.03	0.03	<0.01	5	18	92
JAN 21...	0.44	0.031	0.031	0.6	0.041	0.021	0.01	--	--	--
APR 15...	0.50	--	0.04	0.4	0.03	0.01	<0.01	17	66	57
JUL 22...	0.19	0.11	0.10	0.6	0.06	0.02	0.01	9	36	62

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 16...	<10	<1	33	<0.5	<1	2	<3	3	10	<5
JAN 21...	20	<1	24	<0.5	1	<1	<3	4	75	<5
JUL 22...	<10	<1	28	<0.5	1	<1	<3	2	19	<5

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 16...	9	8	<0.1	<10	3	<1	<1	77	<6	<3
JAN 21...	<4	40	<0.1	<10	<1	<1	<1	78	<6	16
JUL 22...	<4	46	<0.1	<10	2	<1	<1	85	<6	9

## TENNESSEE RIVER BASIN

03487550 REEDY CREEK AT OREBANK, TN

LOCATION.--Lat 36°33'42", long 82°27'36", Sullivan County, Hydrologic Unit 06010102, on left bank, 50 ft upstream from Anderson Bridge, 0.1 mi south of U.S. Highway 11W, 0.3 mi north of Orebanks, 1.0 mi upstream from Gaines Branch, and at mile 9.8.

DRAINAGE AREA.--36.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORDS.--WRD TN 1973: 1971(P), 1972(M); WRD TN 1980: 1979(M), 1982(P)(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,232.61 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 4, 1975, at site 50 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Feb. 18-27. Records good. The Bloomingdale Utility District diverts an average of about 0.6 ft<sup>3</sup>/s for water supply, 0.8 mi upstream from the gage. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--23 years, 44.3 ft<sup>3</sup>/s, 16.57 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,940 ft<sup>3</sup>/s, Oct. 2, 1977, gage height, 11.61 ft, from rating curve extended above 1,300 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; minimum, 2.2 ft<sup>3</sup>/s, July 27, 1982 and Oct. 28, 1984, result of upstream pumpage.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1927, reached a stage of 11.4 ft, discharge, about 11,000 ft<sup>3</sup>/s, datum then in use and before flood plain development, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Nov. 30	0830	1,050	7.31	Feb. 18	Unknown	*1,220	*7.91

Minimum discharge, 5.1 ft<sup>3</sup>/s, Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	8.2	8.0	218	20	36	87	27	13	122	11	6.6	52	
2	10	21	137	18	72	79	26	13	51	13	6.4	31	
3	12	13	94	19	124	72	25	12	39	13	6.7	24	
4	11	69	72	18	114	63	24	12	32	10	6.4	61	
5	8.8	96	62	18	109	57	23	13	29	9.7	6.4	53	
6	8.9	37	56	16	105	56	23	13	34	9.7	6.7	32	
7	8.4	26	48	16	88	53	23	12	35	9.7	8.2	20	
8	8.2	20	43	14	66	48	26	11	28	9.2	7.4	16	
9	8.3	17	39	14	55	46	24	11	25	9.5	8.0	14	
10	8.6	18	36	14	48	45	22	11	23	19	7.1	12	
11	8.3	15	35	14	61	44	21	13	23	15	15	7.3	
12	8.4	11	39	14	52	42	21	51	21	13	13	11	
13	8.6	11	40	14	45	60	19	22	19	42	8.5	10	
14	9.0	12	37	13	44	83	19	18	18	41	7.2	8.6	
15	10	11	34	13	42	100	19	15	16	15	6.9	8.5	
16	12	14	32	13	41	73	18	29	16	13	6.7	8.6	
17	10	44	30	13	400	59	18	79	15	11	13	8.1	
18	9.6	26	28	13	600	51	18	32	14	9.7	9.1	7.9	
19	9.6	20	25	24	400	58	17	31	14	9.5	7.7	8.1	
20	11	16	25	23	300	50	17	50	14	8.8	7.5	7.7	
21	44	17	24	19	200	45	19	34	13	8.6	7.3	7.8	
22	22	83	22	22	140	42	18	27	13	8.3	7.2	7.1	
23	11	47	23	23	170	40	16	26	13	7.9	7.2	7.0	
24	9.3	33	23	21	140	39	15	70	13	7.5	12	14	
25	8.5	26	22	21	120	37	15	149	13	7.3	7.2	9.8	
26	7.7	23	19	31	110	33	15	80	12	7.3	5.9	7.8	
27	7.3	71	20	31	100	32	14	52	11	6.8	12	7.5	
28	7.1	230	19	24	91	31	14	65	13	8.5	40	10	
29	6.7	353	18	26	---	29	13	53	14	7.2	13	13	
30	6.7	738	16	24	---	29	13	43	13	6.9	12	9.8	
31	7.0	---	17	23	---	28	---	60	---	6.7	8.6	---	
TOTAL	326.2	2126.0	1353	586	3873	1611	582	1120	716	374.8	296.9	494.6	
MEAN	10.5	70.9	43.6	18.9	138	52.0	19.4	36.1	23.9	12.1	9.58	16.5	
MAX	44	738	218	31	600	100	27	149	122	42	40	61	
MIN	6.7	8.0	16	13	36	28	13	11	11	6.7	5.9	7.0	
CFSM	.29	1.95	1.20	.52	3.80	1.43	.53	.99	.66	.33	.26	.45	
IN.	.33	2.18	1.39	.60	3.97	1.65	.60	1.15	.73	.38	.30	.51	
CAL YR 1985	TOTAL	11964.9		MEAN	32.8	MAX	738	MIN	6.7	CFSM	.90	IN.	12.26
WTR YR 1986	TOTAL	13459.5		MEAN	36.9	MAX	738	MIN	5.9	CFSM	1.02	IN.	13.79

TENNESSEE RIVER BASIN

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03490500 HOLSTON RIVER AT SURGOINSVILLE, TN

LOCATION.--Lat 36°28'19", long 82°50'50", Hawkins County, Hydrologic Unit 06010104, on right bank 1,500 ft upstream from Surgoinsville Creek and county bridge at Surgoinsville, 9.8 mi upstream from Big Creek, and at mile 118.7. Records include flow of Surgoinsville Creek.

DRAINAGE AREA.--2,874 mi<sup>2</sup>, includes that of Surgoinsville Creek.

PERIOD OF RECORD.--October 1940 to current year. Prior to April 1941 monthly discharge only, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 1,088.46 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except those for growing season, which are fair. Flow partly regulated by four reservoirs (see p.169). Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--46 years, 3,742 ft<sup>3</sup>/s, 17.68 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,600 ft<sup>3</sup>/s, Feb. 18, 1944, gage height, 17.48 ft; minimum, 470 ft<sup>3</sup>/s, Oct. 21, 1941; minimum daily, 528 ft<sup>3</sup>/s, Oct. 21, 1941. Maximum discharge since closure of Watauga Dam on Dec. 1, 1948, 59,300 ft<sup>3</sup>/s, Mar. 13, 1963, gage height, 17.13 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,600 ft<sup>3</sup>/s, Nov. 30, gage height, 7.42 ft; minimum, 858 ft<sup>3</sup>/s, Oct. 19; minimum daily, 935 ft<sup>3</sup>/s, Oct. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	2090	1080	10900	2370	1460	3530	1540	1120	2150	1550	1550	1970		
2	2400	1300	7640	2790	1590	2650	1390	1090	2020	1620	1550	2100		
3	1490	1290	8180	1750	2110	2660	1310	1050	1980	1640	1540	2130		
4	1990	1530	7550	1460	3840	3590	1790	1040	1850	1540	1550	2370		
5	1300	2200	5690	1680	5490	4940	1550	1030	1620	1620	1540	3480		
6	1290	3760	4830	2490	5150	4170	1260	1020	1530	1560	1550	4820		
7	1750	2920	3810	2750	5220	3970	1290	1020	1480	1660	1600	2440		
8	3450	2380	2230	2640	5090	2540	1240	1030	1490	1810	1600	2640		
9	1390	2010	3320	2450	4380	1570	1240	1010	1490	1930	1610	3740		
10	1260	1630	5540	1640	4090	2450	1210	1150	1530	2130	1660	3390		
11	1110	2090	5110	1030	4040	2560	1180	1060	1700	2160	1700	3330		
12	1190	3360	3710	1040	4960	2570	1180	1420	1620	2080	1790	1880		
13	1120	3100	3160	1580	5780	2570	1160	1270	1550	1720	1710	1910		
14	1210	3700	3750	2780	3560	2440	1150	1290	1470	2290	1710	1890		
15	2090	3600	4650	2370	3280	3720	1170	3430	1300	2580	1730	1880		
16	2060	2430	4370	2920	2560	6090	1140	2360	1250	2700	1710	1950		
17	2780	1700	3150	1680	3190	4420	1110	2540	1630	3260	2110	1970		
18	1200	2020	4000	1050	7890	3830	1120	2590	1390	3170	1960	1930		
19	1110	1610	4480	1100	8910	3730	1120	2310	1520	2720	1840	1900		
20	1210	1670	3970	1610	11400	3930	1100	2260	1590	1590	1930	1920		
21	1120	3510	5040	2790	10800	5960	1140	4140	1940	1600	1900	1950		
22	2430	4310	3710	2520	6600	5490	1360	3080	2060	1750	1790	1940		
23	1260	4010	1900	3360	4710	3400	1100	2320	1600	1680	1840	2000		
24	1610	2600	1340	2930	4570	2440	1100	2250	2640	1690	1820	1940		
25	1580	2500	2310	2020	4780	1840	1100	2790	1440	1820	1850	2010		
26	1390	3060	4770	1630	4060	1590	1240	2460	1390	1770	1810	2040		
27	1220	3200	2870	2710	2600	1540	1100	2160	1400	1830	1940	1950		
28	1210	4650	2080	6520	2670	1520	1110	2220	2160	2040	1910	1960		
29	1220	10200	2250	3560	---	1490	1120	2660	1460	1670	1890	1930		
30	1590	12500	2520	2390	---	1450	1110	2690	1480	1710	1850	1990		
31	935	---	2050	1730	---	1540	---	2390	---	1570	1850	---		
TOTAL	49055	95920	130880	71340	134780	96190	36730	60250	49730	60460	54390	69350		
MEAN	1582	3197	4222	2301	4814	3103	1224	1944	1658	1950	1755	2312		
MAX	3450	12500	10900	6520	11400	6090	1790	4140	2640	3260	2110	4820		
MIN	935	1080	1340	1030	1460	1450	1100	1010	1250	1540	1540	1880		
CAL YR 1985	TOTAL	950865	MEAN	2605	MAX	20300	MIN	935	MEAN†	2705	CFSM†	0.94	IN†	12.78
WTR YR 1986	TOTAL	909075	MEAN	2491	MAX	12500	MIN	935	MEAN†	2614	CFSM†	0.91	IN†	12.35

† Adjusted for change in contents in South Holston, Watauga, Boone, and Fort Patrick Henry lakes.

NOTE.--Contents (cfs-days) for adjustments furnished by Tennessee Valley Authority.

## TENNESSEE RIVER BASIN

03491000 BIG CREEK NEAR ROGERSVILLE, TN

LOCATION.--Lat 36°25'34", long 82°57'07", Hawkins County, Hydrologic Unit 06010104, on left bank 300 ft upstream from county road bridge, 3 mi northeast of Rogersville, and at mile 2.0.

DRAINAGE AREA.--47.3 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1941 to June 1949; occasional low-flow measurements, water years 1950-55, 1957; annual maximum, water years 1955-57; October 1957 to current year.

REVISED RECORDS.--WSP 1436: 1945.

GAGE.--Water-stage recorder. Datum of gage is 1,128.9 ft above National Geodetic Vertical Datum of 1929 (levels based on City of Rogersville construction plans for pumping station). Dec. 7, 1954, to Sept. 30, 1957, crest-stage gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--36 years (water years 1942-48, 1958-86), 58.0 ft<sup>3</sup>/s, 16.65 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,760 ft<sup>3</sup>/s, Mar. 12, 1963, gage height, 9.40 ft, from rating curve extended above 3,000 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; maximum gage height, 10.68 ft, Dec. 30, 1969, backwater from log jam; minimum discharge observed, 1.3 ft<sup>3</sup>/s, Sept. 23, 1955; minimum gage height, 1.32 ft, Sept. 12, Oct. 2, 1941.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Feb. 18	0715	*876	*4.26				

Minimum discharge, 2.6 ft<sup>3</sup>/s, Oct. 1, Aug. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	3.0	4.7	112	13	15	77	23	9.5	21	5.6	4.4	6.7	
2	4.2	6.5	93	14	30	67	22	9.1	18	13	4.1	13	
3	6.2	8.1	62	13	66	61	21	8.6	15	20	3.8	24	
4	4.7	11	46	13	71	53	20	8.4	13	11	3.5	22	
5	4.0	23	38	13	67	48	19	8.3	12	7.4	3.2	44	
6	3.6	15	34	11	89	44	18	8.1	11	6.0	2.9	22	
7	3.3	9.3	28	11	83	40	22	8.1	9.8	5.3	2.7	13	
8	3.3	7.1	25	10	67	35	20	7.9	9.6	4.8	3.0	9.5	
9	3.1	6.2	22	8.9	52	33	18	7.8	11	4.6	3.1	8.2	
10	3.0	5.6	20	9.3	42	31	17	7.4	9.7	5.4	3.3	7.1	
11	3.0	5.1	18	9.2	42	31	16	7.2	8.1	5.3	4.7	6.2	
12	3.0	4.8	21	9.3	40	30	15	7.6	7.5	6.5	11	5.8	
13	3.1	4.7	23	9.1	34	38	15	7.6	6.8	6.2	9.6	5.7	
14	3.5	4.6	21	8.6	32	93	15	9.0	6.3	10	6.2	6.4	
15	3.8	4.6	19	8.6	32	145	15	9.2	6.0	15	4.7	5.4	
16	4.0	5.0	17	8.3	30	108	14	9.4	5.7	8.0	4.2	5.2	
17	4.3	15	17	8.2	217	78	14	17	5.1	6.3	4.3	4.8	
18	4.3	18	16	8.5	675	62	14	16	4.7	5.6	11	4.5	
19	4.3	11	14	10	420	68	13	15	4.6	5.4	14	4.2	
20	4.3	8.2	14	14	376	71	12	30	4.5	4.5	9.6	4.2	
21	5.9	7.5	14	13	182	58	15	28	4.2	4.0	11	7.6	
22	7.4	51	12	11	142	50	16	16	4.0	3.8	9.1	11	
23	7.5	44	13	11	180	45	13	15	3.8	3.9	7.6	7.5	
24	6.5	23	14	11	136	40	12	30	3.7	3.4	6.4	6.6	
25	6.1	16	13	11	113	36	11	41	3.6	27	5.2	7.7	
26	5.6	13	11	13	95	33	11	41	3.2	14	5.0	7.3	
27	5.0	57	11	13	96	32	11	63	2.9	8.7	4.8	5.9	
28	4.7	178	11	11	90	30	10	70	7.0	12	5.5	4.8	
29	4.3	245	10	11	---	27	10	49	11	8.8	5.8	6.0	
30	4.2	162	9.8	12	---	25	9.9	34	7.7	6.3	5.6	5.7	
31	4.4	---	10	13	---	24	---	26	---	5.0	5.3	---	
TOTAL	137.6	974.0	788.8	340.0	3514	1613	461.9	624.2	240.5	252.8	184.6	292.0	
MEAN	4.44	32.5	25.4	11.0	126	52.0	15.4	20.1	8.02	8.15	5.95	9.73	
MAX	7.5	245	112	14	675	145	23	70	21	27	14	44	
MIN	3.0	4.6	9.8	8.2	15	24	9.9	7.2	2.9	3.4	2.7	4.2	
CFSM	.09	.69	.54	.23	2.66	1.10	.33	.42	.17	.17	.13	.21	
IN.	.11	.77	.62	.27	2.76	1.27	.36	.49	.19	.20	.15	.23	
CAL YR 1985	TOTAL	10786.9		MEAN	29.6	MAX	1040	MIN	2.5	CFSM	.63	IN.	8.48
WTR YR 1986	TOTAL	9423.4		MEAN	25.8	MAX	675	MIN	2.7	CFSM	.55	IN.	7.41



## TENNESSEE RIVER BASIN

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03491300 BEECH CREEK AT KEPLER, TN

LOCATION.--Lat 36°24'06", long 82°53'09", Hawkins County, Hydrologic Unit 06010104, on upstream right wingwall of county road bridge, at Kepler, 5.9 mi east of intersection of U.S. Highway 11W and Burem Road, and at mile 6.6.

DRAINAGE AREA.--47.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1965 to current year. Occasional low-flow measurements, water years 1961-62, 1964-65.

GAGE.--Water-stage recorder. Datum of gage is 1,107.83 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 8-10, 27-31. Records fair. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--21 years, 48.9 ft<sup>3</sup>/s, 14.13 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,480 ft<sup>3</sup>/s, Mar. 30, 1975, gage height, 13.38 ft, from rating curve extended above 1,300 ft<sup>3</sup>/s; minimum, 0.77 ft<sup>3</sup>/s, Aug. 6, 7, 8, 1986.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 12, 1963, reached a stage of 14.6 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 1,200 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Nov. 30	1015	*1,700	*9.76	No other peak greater than base discharge.			

Minimum discharge, 0.77 ft<sup>3</sup>/s, Aug. 6, 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	2.6	7.3	182	9.6	28	64	21	8.2	12	4.2	1.2	14	
2	4.7	11	103	10	49	53	20	8.1	16	11	1.2	30	
3	7.1	17	54	11	66	46	19	7.5	29	23	1.0	42	
4	7.7	144	38	13	54	39	18	7.4	14	6.4	.91	84	
5	4.4	147	32	13	112	34	17	7.5	11	3.9	.86	59	
6	3.7	33	29	12	108	33	17	7.4	9.4	3.1	.79	22	
7	3.1	19	24	11	90	29	18	7.1	8.4	2.6	.77	12	
8	2.5	14	21	11	55	25	17	6.9	8.5	2.2	.83	7.2	
9	2.6	12	19	10	41	24	16	6.6	7.8	2.0	1.0	6.1	
10	2.5	10	17	9.3	35	24	15	6.0	6.6	3.0	1.1	5.5	
11	2.5	9.1	17	8.3	95	24	14	6.3	7.1	5.0	1.4	4.5	
12	2.5	8.4	25	7.7	66	22	14	8.5	5.8	4.6	3.8	4.4	
13	2.5	8.0	27	7.4	44	105	13	7.5	4.9	4.1	2.5	4.4	
14	2.8	7.8	25	6.7	52	151	13	7.9	4.3	13	1.7	4.0	
15	4.8	7.2	20	5.5	53	197	14	6.8	3.9	6.7	1.4	3.5	
16	7.3	9.7	19	5.5	40	110	13	7.6	3.6	4.0	1.2	4.0	
17	4.8	50	18	5.3	410	74	12	26	3.3	3.6	118	4.2	
18	4.0	22	16	7.7	651	56	12	14	3.0	2.6	43	3.6	
19	4.0	15	14	14	390	94	11	11	2.7	2.0	18	3.5	
20	4.2	12	13	16	254	70	11	19	2.5	1.5	32	3.6	
21	99	13	13	12	140	51	12	12	2.4	1.4	22	7.5	
22	82	198	14	12	130	43	12	8.9	2.2	1.4	9.4	5.2	
23	32	59	14	11	139	40	9.7	17	2.1	1.3	7.9	4.2	
24	18	29	14	10	102	36	9.4	34	2.5	1.3	5.9	4.6	
25	11	21	14	11	80	32	9.1	37	2.1	2.2	3.8	5.9	
26	8.2	18	14	20	64	30	9.1	26	1.7	5.6	2.9	4.7	
27	6.9	40	13	30	112	29	9.0	24	1.5	3.0	2.8	4.1	
28	6.4	235	12	25	89	26	8.6	24	10	3.2	4.8	3.9	
29	6.0	378	11	23	---	24	9.2	20	23	2.2	5.1	3.9	
30	5.5	1010	8.7	22	---	23	8.5	16	7.7	1.5	3.2	5.3	
31	5.9	---	10	21	---	22	---	14	---	1.2	2.5	---	
TOTAL	361.2	2564.5	850.7	391.0	3549	1630	401.6	420.2	219.0	152.6	302.96	370.8	
MEAN	11.7	85.5	27.4	12.6	127	52.6	13.4	13.6	7.30	4.92	9.77	12.4	
MAX	99	1010	182	30	651	197	21	37	29	23	118	84	
MIN	2.5	7.2	8.7	5.3	28	22	8.5	6.0	1.5	1.2	.77	3.5	
CFSM	.25	1.82	.58	.27	2.70	1.12	.29	.29	.16	.10	.21	.26	
IN.	.29	2.03	.67	.31	2.81	1.29	.32	.33	.17	.12	.24	.29	
CAL YR 1985	TOTAL	12266.6		MEAN	33.6	MAX	1450	MIN	2.1	CFSM	.71	IN.	9.71
WTR YR 1986	TOTAL	11213.56		MEAN	30.7	MAX	1010	MIN	.77	CFSM	.65	IN.	8.88

## TENNESSEE RIVER BASIN

03495500 HOLSTON RIVER NEAR KNOXVILLE, TN  
(National stream-quality accounting network station)

LOCATION.--Lat 36°00'56", 83°49'54", Knox County, Hydrologic Unit 06010104, on right bank at bridge on U.S. Highway 70, at Knoxville city limits, and 5.5 mi upstream from confluence with French Broad River.

DRAINAGE AREA.--3,747 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to June 1976, January 1978 to current year. Published as "at Strawberry Plains" 1930-48. Records published for both sites June 1945 to September 1948. Gage-height records collected at Strawberry Plains from December to March 1885-97 are contained in reports of the U.S. Weather Bureau.

REVISED RECORDS.--WSP 893: 1935(M). WSP 1336: 1939.

GAGE.--Water-stage recorder. Datum of gage is 815.84 ft above National Geodetic Vertical Datum of 1929.

Oct. 1, 1930, to June 8, 1931, nonrecording gage, and June 9, 1931, to Sept. 30, 1948, water-stage recorder, at site 12 mi upstream at datum 22.55 ft higher. June 19, 1945, to Oct. 4, 1960, 300 ft upstream at present datum.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by five reservoirs (see p. 169).

AVERAGE DISCHARGE.--53 years (water years 1931-75, 1979-86), 4,699 ft<sup>3</sup>/s, 17.03 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.-- Maximum discharge, 62,900 ft<sup>3</sup>/s, Mar. 28, 1935, gage height, 20.20 ft, site and datum then in use; minimum, 44 ft<sup>3</sup>/s, Dec. 12, 21, 22, 1941, gage height, -0.58 ft, site and datum then in use; minimum daily, 44 ft<sup>3</sup>/s, Dec. 21, 22, 1941. Maximum discharge since closure of Cherokee Dam on Dec. 5, 1941, 31,400 ft<sup>3</sup>/s, Mar. 22, 1963, gage height, 11.20 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1791, about 41 ft in March 1867, from profile by Tennessee Valley Authority. Flood in 1901 reached a stage of about 32 ft, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,900 ft<sup>3</sup>/s, Dec. 19, gage height, 7.43 ft; minimum, 123 ft<sup>3</sup>/s, Oct. 28, 29; minimum daily, 145 ft<sup>3</sup>/s, Oct. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5220	819	768	4610	856	2910	1170	287	530	2570	3450	1590
2	7410	794	1330	5300	592	2020	476	1090	395	4250	4320	4870
3	2150	592	8400	3770	607	1830	1310	790	1450	3230	1680	4790
4	2540	319	8380	1820	600	4030	1290	398	3180	1710	1680	5100
5	2650	611	7110	2820	635	9090	567	236	1630	1620	3760	5040
6	2210	998	5250	4480	2010	8570	293	1060	1740	1620	4560	5300
7	1100	1030	4770	5570	3910	8800	240	586	1630	1570	1570	2020
8	6010	1170	1830	5720	2980	5190	1110	333	1580	6370	3790	1590
9	1790	1340	5030	7530	870	1470	597	914	1650	5310	1980	4810
10	3250	1010	9130	5050	537	2090	357	1140	1720	5320	1430	4740
11	2520	791	9620	1810	4270	4740	1290	1160	1600	3530	1330	6620
12	2420	4340	10100	1720	8220	4770	538	1190	1680	5210	3440	6580
13	1630	4540	8260	2900	10100	4640	288	1240	1770	1690	1250	6410
14	644	4520	7050	5270	5240	1570	229	1030	3000	3440	3160	1330
15	2110	3960	11400	4540	4400	1720	942	1030	1620	4610	4670	1170
16	2740	2030	9310	3260	2960	962	546	1200	1570	2090	5960	4030
17	7260	1400	9170	1880	2740	643	1030	1160	3670	6030	1740	5960
18	2550	1530	8440	1570	3300	513	681	1220	3010	6130	1630	6140
19	4470	3350	12200	1290	1530	2410	363	1110	2530	5990	5880	6280
20	1770	3460	9570	2060	914	2930	1280	1380	2160	1740	3580	2070
21	623	3730	9380	4540	677	6430	439	1310	2780	1570	1490	1410
22	4560	3430	7200	2950	1600	6230	292	1010	1680	4980	3370	1430
23	2160	3190	4110	5110	856	2520	927	1360	1580	5700	3540	3630
24	2040	1550	2460	4620	577	1020	428	1960	6710	5100	1280	5110
25	2090	1560	6860	2230	1600	1800	243	1640	4500	6450	1130	5140
26	603	3160	11800	1080	1620	626	932	1540	3030	6750	5500	5470
27	235	2650	7850	1960	695	391	564	2080	1770	1800	5700	5130
28	145	1910	3390	11000	485	950	346	1990	5440	1820	5920	2590
29	1500	2150	5570	8810	---	575	1170	1880	1720	4660	5590	2590
30	2000	1790	4680	4060	---	350	517	3330	1660	4530	5600	5390
31	808	---	3620	2230	---	332	---	1340	---	4390	1680	---
TOTAL	79208	63724	214038	121560	65381	92122	20455	37994	68985	121780	101660	124330
MEAN	2555	2124	6904	3921	2335	2972	682	1226	2300	3928	3279	4144
MAX	7410	4540	12200	11000	10100	9090	1310	3330	6710	6750	5960	6620
MIN	145	319	768	1080	485	332	229	236	395	1570	1130	1170
CFSM	.68	.57	1.84	1.05	.62	.79	.18	.33	.61	1.05	.88	1.11
IN.	.79	.63	2.12	1.21	.65	.91	.20	.38	.68	1.21	1.01	1.23

CAL YR 1985 TOTAL 1132010 MEAN 3101 MAX 12200 MIN 145 MEAN+ 3214 CFSM+ .86 IN.+ 11.64  
WTR YR 1986 TOTAL 1111237 MEAN 3044 MAX 12200 MIN 145 MEAN+ 3211 CFSM+ .86 IN.+ 11.63

+ Adjusted for change in contents in South Holston, Watauga, Boone, Fort Patrick Henry, and Cherokee lakes.  
NOTE.--Contents (cfs-days) for adjustments furnished by Tennessee Valley Authority.

03495500 HOLSTON RIVER NEAR KNOXVILLE, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965, 1977 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1980 to current year.

WATER TEMPERATURE: February 1980 to current year.

INSTRUMENTATION.--Water quality monitor since Feb. 23, 1980.

REMARKS.--Flow regulated by many reservoirs (see p. 169).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 365 microsiemens, Mar. 1, 1981; minimum, 121 microsiemens, July 31, 1982.

WATER TEMPERATURE: Maximum, 27.0°C, Aug. 21, 1982, Sept. 2, 1985; minimum, 1.0°C, Jan. 27, 1986.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 330 microsiemens, Dec. 16, Aug. 11; minimum, 211 microsiemens, Nov. 15.

WATER TEMPERATURE: Maximum, 25.5°C, May 8, Sept. 23, 27-30; minimum, 1.0°C, Jan. 27.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 29...	0900	2230	295	8.20	19.0	742	4.0	8.0	89	320
DEC 09...	1245	1750	300	8.20	12.0	748	3.5	10.5	99	33
FEB 18...	1030	3180	230	7.90	7.0	738	100	11.0	94	130
APR 08...	1030	1220	300	8.10	18.0	738	27	7.2	79	77
JUN 10...	1220	2690	293	8.10	20.0	744	5.5	8.4	95	300
AUG 12...	1200	3600	300	7.90	20.0	744	7.2	6.6	74	310

DATE	STREP- TOCOCCHI FECAL KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3
OCT 29...	53	120	13	33	9.4	15	21	0.6	2.1	107
DEC 09...	24	120	18	34	8.9	15	21	0.6	2.4	102
FEB 18...	6000	110	26	33	6.2	6.9	12	0.3	2.7	84
APR 08...	58	150	17	42	10	11	14	0.4	2.1	133
JUN 10...	210	140	27	39	9.1	11	15	0.4	1.8	113
AUG 12...	560	130	6	36	9.3	13	18	0.5	2.1	124

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
OCT 29...	1.3	28	16	0.2	2.7	176	170	0.24	1060	0.04
DEC 09...	1.3	31	16	0.1	3.0	178	170	0.24	841	<0.01
FEB 18...	2.0	16	9.6	0.1	3.5	144	130	0.2	1240	<0.01
APR 08...	2.2	24	13	0.1	0.8	176	190	0.24	580	0.01
JUN 10...	1.8	23	11	0.1	2.3	174	170	0.24	1260	<0.01
AUG 12...	3.1	25	16	0.1	2.5	172	180	0.23	1670	0.02

## TENNESSEE RIVER BASIN

03495500 HOLSTON RIVER NEAR KNOXVILLE, TN--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 29...	0.36	0.06	0.04	0.4	0.04	0.02	0.02	20	120	73
DEC 09...	0.56	0.02	0.02	0.5	0.02	0.02	<0.01	5	24	75
FEB 18...	0.86	0.11	0.09	1.2	0.12	0.05	0.04	139	1190	98
APR 08...	0.43	0.10	0.10	0.7	0.04	0.01	<0.01	19	63	79
JUN 10...	0.66	0.04	0.04	0.4	0.03	0.01	0.01	19	138	88
AUG 12...	0.25	0.11	0.09	0.6	0.08	0.04	0.04	21	204	75
DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 29...	<10	1	33	<0.5	<1	<1	<3	2	5	<5
FEB 18...	20	<1	24	<0.5	<1	<1	<3	2	62	<5
JUN 10...	<10	<1	34	<0.5	<1	<1	<3	1	7	<5
DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 29...	<4	12	<0.1	<10	<1	<1	<1	140	<6	8
FEB 18...	<4	10	<0.1	<10	2	<1	<1	96	<6	15
JUN 10...	8	20	<0.1	<10	1	<1	<1	130	<6	7



03495500 HOLSTON RIVER NEAR KNOXVILLE, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	300	290	292	285	280	283	302	288	298	296	275	284
2	295	290	293	283	278	280	301	280	291	305	274	285
3	301	290	298	282	278	280	290	255	271	307	283	294
4	301	290	298	281	267	278	264	253	260	304	273	287
5	301	290	296	285	274	278	267	262	264	292	272	280
6	300	290	296	288	273	280	265	251	261	287	262	274
7	305	290	298	282	271	277	289	259	272	286	271	275
8	302	290	300	280	270	274	301	267	284	275	260	266
9	301	296	299	273	268	271	301	280	290	285	260	268
10	300	287	297	268	257	263	300	270	280	289	260	272
11	300	295	297	261	246	257	295	271	283	288	258	272
12	300	295	297	249	234	244	291	281	286	292	258	273
13	299	294	296	244	233	239	281	261	277	277	257	267
14	298	293	295	236	221	231	265	241	259	273	248	262
15	298	293	296	235	211	228	274	244	256	282	258	267
16	293	283	290	243	229	235	330	275	304	284	259	267
17	286	281	285	242	228	236	328	295	312	290	260	272
18	286	281	284	261	226	245	309	294	303	284	260	271
19	290	280	286	284	234	260	314	283	298	282	262	275
20	291	281	289	288	274	281	303	292	297	276	261	270
21	289	279	283	292	281	287	307	282	293	287	262	269
22	288	278	282	295	281	291	316	281	296	274	263	269
23	293	278	282	294	279	286	321	301	309	274	254	265
24	287	277	281	302	277	290	315	291	304	279	254	266
25	287	286	287	310	290	298	293	269	281	270	265	267
26	291	286	287	299	284	294	293	269	281	270	265	268
27	290	286	288	304	293	297	309	279	291	267	256	260
28	296	285	290	297	263	284	302	277	292	261	246	255
29	299	284	292	291	255	274	301	277	288	268	257	262
30	293	283	284	304	279	290	300	267	285	278	258	269
31	286	281	283	---	---	---	286	275	279	283	258	271
MONTH	305	277	291	310	211	270	330	241	285	307	246	271

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	293	273	279	313	278	300	302	277	287	297	290	294
2	291	270	280	299	278	291	301	287	295	302	291	295
3	295	280	290	303	280	293	294	286	290	300	292	296
4	296	281	291	294	279	285	292	281	285	294	283	289
5	302	282	291	290	279	285	289	283	286	292	285	288
6	296	272	283	291	288	289	292	285	288	296	286	290
7	288	273	278	293	289	291	300	286	292	301	288	296
8	288	263	277	293	290	291	303	289	294	295	283	292
9	289	274	282	305	290	296	296	286	291	297	284	290
10	289	275	282	312	286	298	292	283	287	299	286	292
11	285	265	271	292	285	290	299	287	293	295	286	290
12	274	267	270	292	285	289	297	285	290	294	288	291
13	274	259	268	291	286	289	296	285	290	294	289	291
14	272	268	269	300	285	294	299	291	295	296	289	292
15	282	268	272	301	286	293	306	292	300	294	286	289
16	292	258	276	302	293	296	301	293	299	293	287	290
17	281	232	278	302	288	293	300	289	294	292	284	290
18	247	226	233	303	276	286	302	292	297	286	278	282
19	257	236	246	303	268	288	303	295	298	290	282	285
20	276	246	261	296	274	285	302	287	294	287	283	285
21	288	267	277	295	285	291	299	294	296	288	280	285
22	312	278	293	290	281	288	304	295	300	298	286	291
23	321	307	313	296	286	289	308	295	302	294	281	288
24	318	301	309	292	277	287	305	292	296	280	251	264
25	311	297	303	296	271	290	309	302	304	283	260	270
26	313	298	301	293	283	287	308	289	301	289	271	280
27	313	308	310	295	275	287	306	289	298	299	278	290
28	318	298	308	287	267	279	305	294	300	298	281	291
29	---	---	---	294	265	282	300	290	296	300	286	294
30	---	---	---	297	281	289	301	294	298	302	288	295
31	---	---	---	287	279	282	---	---	---	298	289	294
MONTH	321	226	282	313	265	289	309	277	295	302	251	289

## TENNESSEE RIVER BASIN

03495500 HOLSTON RIVER NEAR KNOXVILLE, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	304	286	295	298	292	295	305	298	302	306	297	301
2	310	299	305	297	291	293	304	295	302	308	292	300
3	318	302	310	295	287	292	304	300	302	299	286	294
4	318	289	299	299	294	296	306	298	302	299	294	297
5	299	290	295	300	290	297	306	298	304	300	293	296
6	301	293	298	300	293	297	304	296	302	298	294	296
7	301	292	297	300	295	298	305	300	303	302	296	299
8	300	294	297	297	288	294	307	297	304	306	302	304
9	301	293	297	298	292	295	304	299	302	301	295	297
10	299	292	296	298	291	296	307	300	303	299	292	297
11	301	290	296	298	291	295	330	302	306	298	293	295
12	300	291	295	297	289	294	306	298	302	298	292	295
13	299	291	295	300	292	296	306	302	303	298	292	296
14	298	287	293	301	291	297	309	303	307	301	298	300
15	297	292	294	300	295	298	308	301	303	303	300	302
16	297	289	294	302	293	298	302	297	300	303	297	299
17	296	283	291	298	289	296	304	300	301	299	293	297
18	295	289	292	298	291	296	312	303	307	299	294	296
19	294	290	292	297	290	296	309	297	300	300	295	297
20	295	288	292	299	295	297	305	293	301	302	299	300
21	296	285	292	299	289	295	307	301	304	306	301	304
22	295	289	292	299	288	297	309	305	307	311	306	308
23	296	290	293	299	292	297	306	301	304	311	305	309
24	294	284	291	300	292	298	307	304	305	311	305	308
25	294	289	292	298	288	296	310	306	308	312	305	309
26	295	288	292	299	291	297	308	298	301	311	306	309
27	296	290	293	302	297	299	302	296	299	312	306	309
28	296	286	291	299	280	291	300	295	299	316	308	312
29	294	289	292	301	288	298	298	293	296	316	311	314
30	294	286	288	302	293	300	298	291	295	313	307	309
31	---	---	---	304	294	301	299	296	298	---	---	---
MONTH	318	283	295	304	280	296	330	291	302	316	286	302

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	22.0	19.5	20.5	17.5	16.5	17.0	17.0	16.0	16.5	7.0	5.5	6.5
2	21.0	20.5	20.5	18.0	17.0	17.5	16.0	11.5	14.5	7.5	6.0	6.5
3	21.0	20.0	20.5	18.0	17.5	17.5	14.0	12.0	13.0	8.0	6.5	7.0
4	21.0	19.5	20.5	17.5	16.0	16.5	14.5	13.5	14.0	8.0	7.0	7.5
5	21.5	19.5	20.5	16.0	13.0	15.0	14.5	13.5	14.0	7.0	5.5	6.5
6	20.5	18.5	19.0	13.0	12.0	12.5	13.5	13.0	13.5	6.0	4.5	5.5
7	19.5	17.5	18.5	13.0	12.0	12.5	13.0	12.0	12.5	6.5	5.5	6.0
8	21.0	17.5	20.0	12.5	11.5	12.0	13.0	11.5	12.0	6.0	5.0	5.5
9	21.0	20.5	21.0	13.5	12.5	13.0	13.0	11.0	12.0	5.5	4.5	5.0
10	22.0	21.0	21.5	14.0	13.0	13.5	13.5	12.5	13.0	6.0	5.0	5.5
11	22.0	21.5	22.0	15.0	13.5	14.5	13.5	12.5	13.0	6.0	4.5	5.5
12	22.0	22.0	22.0	17.5	15.0	16.5	13.5	13.0	13.5	5.5	4.5	5.0
13	22.5	20.5	22.0	17.5	16.5	17.0	13.5	12.5	13.0	5.5	4.5	5.0
14	23.0	20.5	22.5	17.5	17.0	17.5	12.5	10.5	11.5	5.0	4.0	4.5
15	22.5	20.5	22.0	18.0	17.0	17.5	11.5	10.5	11.0	5.5	4.5	5.0
16	22.0	21.0	21.5	18.0	17.0	17.5	11.5	10.5	11.0	6.0	4.5	5.0
17	21.5	20.5	21.0	17.5	17.0	17.5	11.5	10.5	11.0	5.5	4.5	5.0
18	21.0	20.5	21.0	17.5	17.0	17.5	11.0	9.5	10.5	6.5	5.5	6.0
19	21.5	21.0	21.5	18.0	16.5	17.5	10.5	9.5	10.0	7.0	5.0	6.5
20	21.5	21.0	21.5	17.5	16.5	17.0	10.5	9.0	9.5	6.5	6.0	6.5
21	22.0	21.5	22.0	16.5	15.5	16.0	9.5	8.5	9.0	6.5	4.5	5.5
22	21.5	20.5	21.0	16.0	15.5	16.0	9.0	8.0	8.5	5.5	5.0	5.5
23	20.5	20.5	20.5	15.5	14.5	15.5	9.5	9.0	9.5	6.0	5.0	5.5
24	20.5	20.5	20.5	15.5	14.0	15.0	9.5	8.0	8.5	5.5	4.5	5.0
25	20.5	20.0	20.5	15.5	14.0	15.0	8.5	7.0	7.5	5.0	4.5	5.0
26	21.5	20.5	21.0	16.5	15.5	16.0	7.5	7.0	7.5	5.0	4.0	4.5
27	20.5	19.5	20.0	17.0	16.5	17.0	7.5	7.0	7.5	4.0	1.0	3.0
28	20.5	19.0	20.0	17.0	16.5	17.0	7.5	7.0	7.0	3.5	1.5	3.0
29	20.0	18.0	18.5	17.0	16.5	17.0	7.0	6.0	7.0	4.0	3.5	4.0
30	18.0	17.0	17.5	17.0	16.5	17.0	6.5	5.5	6.0	4.5	3.0	4.0
31	17.5	16.5	17.0	---	---	---	6.5	6.0	6.0	5.0	3.5	4.0
MONTH	23.0	16.5	20.5	18.0	11.5	16.0	17.0	5.5	10.5	8.0	1.0	5.5

## 03495500 HOLSTON RIVER NEAR KNOXVILLE, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	6.0	4.5	5.5	6.5	5.0	6.0	19.0	16.0	17.5	22.0	21.0	21.5
2	7.0	5.5	6.0	9.5	5.0	5.5	19.0	16.5	17.5	21.5	20.5	21.0
3	8.0	6.5	7.0	6.5	4.5	6.0	18.5	17.0	17.5	20.5	19.0	20.0
4	10.0	7.5	8.5	7.5	4.5	6.0	17.5	16.0	17.0	21.5	18.5	19.5
5	11.5	9.5	10.5	6.5	4.5	5.5	16.5	15.5	16.0	21.0	19.0	20.0
6	12.5	10.5	11.5	6.5	6.0	6.5	18.0	16.0	17.0	22.0	19.5	20.5
7	9.0	6.0	6.5	6.0	5.5	5.5	19.0	17.0	18.0	22.5	21.5	22.0
8	7.5	7.0	7.0	7.0	5.5	6.0	19.0	18.0	18.5	25.5	22.0	23.5
9	7.5	7.0	7.5	7.5	6.5	7.0	18.0	16.0	17.0	24.5	23.5	24.0
10	8.0	7.5	8.0	11.0	7.0	9.0	16.5	15.0	16.0	24.5	23.5	24.0
11	7.5	5.0	6.0	10.5	8.0	9.0	15.0	13.5	14.0	23.5	22.0	23.0
12	5.0	4.0	4.5	9.5	8.0	8.5	15.5	14.0	14.5	22.0	21.0	21.5
13	5.5	4.0	4.5	9.5	8.5	8.5	16.5	14.0	15.0	21.0	19.5	20.0
14	5.0	3.0	4.5	9.5	9.0	9.0	17.5	15.5	16.5	19.5	19.0	19.0
15	5.5	3.0	4.5	10.5	9.5	10.0	18.0	16.0	17.0	21.0	19.5	20.0
16	6.5	5.0	5.5	11.5	10.5	11.0	18.0	16.0	17.0	21.0	20.5	20.5
17	7.0	6.0	6.5	13.0	11.0	12.0	16.0	12.0	14.0	21.5	20.5	21.0
18	9.0	6.0	7.5	14.5	11.5	13.0	14.0	12.0	13.0	22.0	21.0	21.5
19	10.0	8.5	9.5	14.0	13.0	13.5	16.0	12.5	14.0	21.0	20.0	20.5
20	11.0	9.0	10.0	13.0	10.0	11.5	17.5	15.0	16.5	20.5	18.0	19.0
21	12.0	10.5	11.5	9.0	7.0	8.0	16.0	15.0	15.5	18.0	17.0	17.5
22	11.5	10.0	10.5	9.0	7.0	8.0	17.0	15.0	15.5	18.5	17.0	17.5
23	11.0	9.5	10.0	9.5	8.0	8.5	15.5	14.0	14.5	18.5	17.0	18.0
24	10.5	9.5	10.0	12.5	9.5	10.5	17.5	13.5	15.5	16.5	15.5	16.0
25	9.0	5.5	8.0	12.5	11.0	11.5	17.0	15.0	16.0	17.5	16.5	17.0
26	8.0	5.0	6.5	13.5	11.5	12.5	20.5	16.5	18.5	17.5	17.0	17.5
27	8.0	5.5	7.0	15.5	12.0	13.5	22.5	20.5	21.5	18.0	17.5	17.5
28	8.5	5.0	6.5	15.5	13.5	14.5	21.5	20.5	21.0	18.5	17.5	18.0
29	---	---	---	16.0	14.5	15.0	22.0	20.5	21.0	18.5	17.5	18.0
30	---	---	---	16.5	14.0	15.5	22.0	20.5	21.5	18.0	15.5	16.5
31	---	---	---	18.0	15.5	16.5	---	---	---	17.0	15.5	16.5
MONTH	12.5	3.0	7.5	18.0	4.5	10.0	22.5	12.0	17.0	25.5	15.5	19.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	20.0	16.5	18.5	20.5	18.5	19.5	18.5	17.5	18.0	22.5	21.5	22.0
2	23.0	19.5	21.0	18.5	14.5	15.5	20.5	18.5	19.0	22.5	21.5	22.0
3	24.0	21.5	23.0	16.5	15.0	16.0	21.0	19.0	20.0	23.5	22.0	23.0
4	23.0	15.5	19.0	18.0	16.5	17.0	22.5	21.0	22.0	24.0	23.5	23.5
5	16.5	15.0	15.5	21.5	18.0	20.0	22.5	19.5	20.5	24.0	23.0	23.5
6	19.0	16.5	18.0	22.5	21.0	21.5	21.0	19.5	20.0	24.5	23.5	24.0
7	21.0	18.5	19.5	23.0	21.5	22.0	22.0	20.0	21.0	24.5	23.5	24.0
8	22.0	20.0	21.0	22.0	13.5	16.0	22.5	20.0	21.0	24.5	23.0	24.0
9	21.5	20.0	21.0	17.5	14.0	15.5	22.0	21.0	21.5	24.0	22.5	23.5
10	20.0	19.0	19.5	18.0	14.0	15.5	23.5	22.0	23.0	24.5	23.5	24.0
11	21.0	19.0	20.0	16.5	15.0	16.0	23.0	22.5	23.0	25.0	24.0	24.0
12	22.0	20.0	21.0	18.0	14.5	15.5	23.0	20.0	21.0	24.5	24.0	24.5
13	21.5	20.0	20.5	19.5	16.0	18.0	23.5	20.5	22.0	25.0	23.5	24.0
14	20.5	17.0	18.0	21.0	17.5	19.0	24.5	22.5	23.0	24.5	24.0	24.0
15	19.5	17.0	18.0	17.5	15.5	16.5	23.0	21.0	21.5	24.0	23.5	24.0
16	22.0	18.5	20.5	18.5	16.5	17.5	23.0	20.5	21.5	24.5	23.5	24.0
17	21.0	15.5	17.5	21.5	15.0	16.5	23.0	22.0	22.5	24.5	24.0	24.0
18	16.5	15.5	16.0	19.0	15.0	16.5	23.0	22.5	23.0	24.5	23.5	24.0
19	17.5	15.5	16.5	18.5	15.0	16.5	22.5	20.5	21.5	24.0	23.0	24.0
20	18.0	17.0	17.5	20.5	17.5	19.0	24.0	23.0	23.0	24.5	23.5	24.0
21	19.5	16.5	17.5	24.0	20.5	22.0	24.0	23.0	23.5	25.0	24.5	24.5
22	19.5	17.5	18.5	23.0	16.5	18.5	24.5	22.5	23.0	25.0	24.5	24.5
23	22.0	19.5	20.5	19.5	16.0	17.5	23.0	22.5	23.0	25.5	24.5	25.0
24	21.0	12.5	14.5	19.5	16.5	17.5	24.5	23.0	24.0	25.0	24.0	24.5
25	16.0	13.5	14.5	20.0	16.0	17.5	24.5	24.0	24.0	24.5	24.0	24.5
26	17.0	15.0	16.5	19.5	16.5	17.5	24.5	22.5	23.0	25.0	24.0	24.5
27	18.5	17.5	17.5	20.5	18.5	19.5	24.5	22.5	23.0	25.5	24.0	24.5
28	20.0	13.0	15.5	23.5	20.5	22.0	23.5	22.5	22.5	25.5	24.5	25.0
29	18.5	16.0	17.5	23.0	18.0	19.5	23.0	21.5	22.5	25.5	24.5	25.0
30	21.5	18.5	20.0	20.5	18.0	19.0	23.5	22.5	23.0	25.5	24.0	24.5
31	---	---	---	20.0	17.5	18.5	23.0	22.0	22.5	---	---	---
MONTH	24.0	12.5	18.5	24.0	13.5	18.0	24.5	17.5	22.0	25.5	21.5	24.0



## TENNESSEE RIVER BASIN

03497300 LITTLE RIVER ABOVE TOWNSEND, TN  
(Hydrologic bench-mark station)

LOCATION.--Lat 35°39'52", long 83°42'41", Blount County, Hydrologic Unit 06010201, in Great Smoky Mountains National Park, on left bank along State Highway 73, 0.3 mi upstream from Rush Branch, 0.4 mi southeast of Park entrance, 2.2 mi southeast of Townsend, and at mile 35.3.

DRAINAGE AREA.--106 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder and crest stage gage. Datum of gage is 1,106.92 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Sept. 2, 3. Records good.

AVERAGE DISCHARGE.--23 years, 281 ft<sup>3</sup>/s, 36.00 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft<sup>3</sup>/s, Mar. 16, 1973, gage height, 12.30 ft minimum, 21 ft<sup>3</sup>/s, Jan. 18, 1981, gage height, 1.13 ft, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,100 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Mar. 13	1415	*2,310	*4.92				

Minimum discharge, 28 ft<sup>3</sup>/s, Aug. 7, gage height, 1.20 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	42	49	574	191	110	282	157	119	135	65	39	77	
2	75	77	451	146	135	268	150	114	123	127	36	102	
3	55	79	354	141	208	246	142	107	109	136	33	143	
4	53	391	299	138	238	227	136	102	103	74	31	126	
5	46	391	262	134	296	214	130	100	114	61	30	99	
6	42	273	227	124	288	206	125	99	128	56	29	112	
7	40	368	199	125	253	191	132	101	115	53	29	81	
8	39	329	180	110	219	177	207	100	160	50	45	68	
9	37	266	164	117	201	169	176	91	150	47	38	62	
10	37	240	151	121	189	179	146	85	194	450	37	55	
11	37	257	147	114	206	264	137	84	178	330	44	49	
12	37	261	231	106	178	270	132	82	138	203	71	151	
13	37	218	266	104	153	960	128	90	118	134	46	95	
14	37	173	258	96	163	996	124	94	105	136	46	71	
15	41	148	223	98	188	962	124	106	97	116	39	62	
16	98	133	209	93	169	704	116	82	89	94	36	75	
17	57	166	194	93	576	517	115	104	83	82	119	70	
18	45	149	178	94	1320	413	113	102	81	72	155	57	
19	43	130	159	152	881	476	110	104	76	64	112	53	
20	41	120	154	136	662	392	109	132	72	59	73	51	
21	54	147	143	114	487	346	205	104	67	54	92	66	
22	86	335	151	117	401	311	193	91	64	51	84	55	
23	72	273	142	121	350	289	158	144	60	48	68	50	
24	64	224	135	116	307	264	149	135	59	46	58	54	
25	80	192	128	118	278	240	144	194	56	63	52	48	
26	69	170	106	140	247	221	141	155	53	50	46	45	
27	61	156	126	107	318	211	136	214	52	48	56	42	
28	59	223	114	100	298	196	135	238	57	50	102	40	
29	56	504	106	96	---	183	147	226	65	41	90	39	
30	50	725	103	93	---	174	124	185	64	38	65	37	
31	50	---	133	90	---	165	---	156	---	36	58	---	
TOTAL	1640	7167	6267	3645	9319	10713	4241	3840	2965	2934	1859	2135	
MEAN	52.9	239	202	118	333	346	141	124	98.8	94.6	60.0	71.2	
MAX	98	725	574	191	1320	996	207	238	194	450	155	151	
MIN	37	49	103	90	110	165	109	82	52	36	29	37	
CFSM	.50	2.25	1.91	1.11	3.14	3.26	1.33	1.17	.93	.89	.57	.67	
IN.	.58	2.52	2.20	1.28	3.27	3.76	1.49	1.35	1.04	1.03	.65	.75	
CAL YR 1985	TOTAL	71146		MEAN	195	MAX	4240	MIN	37	CFSM	1.84	IN.	24.97
WTR YR 1986	TOTAL	56725		MEAN	155	MAX	1320	MIN	29	CFSM	1.46	IN.	19.91



## TENNESSEE RIVER BASIN

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03497300 LITTLE RIVER ABOVE TOWNSEND, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to 1982, 1986.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1963 to September 1981.

INSTRUMENTATION.--Temperature recorder from October 1963 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.0°C June 23, 1964, July 3, 1970; minimum, 0.0°C on several days during winter periods.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 17...	1100	56	20	7.20	16.0	743	0.6	9.2	96	K9
DEC 10...	1030	151	16	7.10	6.5	744	0.4	11.8	98	K4
FEB 21...	1030	491	12	6.70	9.5	729	0.7	11.0	101	K7
APR 10...	1030	146	17	6.90	9.0	733	11	11.0	99	K10
JUN 12...	1145	138	18	7.00	20.0	732	2.0	8.6	99	58
AUG 14...	1130	45	20	7.10	21.0	736	1.1	8.6	100	41

DATE	STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3
OCT 17...	140	8	0	2.1	0.65	1.2	22	0.2	1.0	10
DEC 10...	K6	5	0	1.3	0.38	0.9	27	0.2	0.4	5
FEB 21...	K8	5	1	1.4	0.4	0.9	25	0.2	0.6	4
APR 10...	K2	6	0	1.6	0.44	1.0	25	0.2	0.5	8
JUN 12...	250	7	1	1.8	0.5	1.1	25	0.2	0.6	6
AUG 14...	92	8	0	2.3	0.59	1.2	23	0.2	0.6	10

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
OCT 17...	0.9	2.4	0.7	<0.1	6.4	23	19	0.03	3.5	<0.01
DEC 10...	0.5	2.1	1.0	<0.1	5.2	15	13	0.02	6.1	<0.01
FEB 21...	1.3	2.4	0.6	<0.1	5.0	12	13	0.02	16	<0.01
APR 10...	2.4	2.7	0.4	<0.1	5.6	15	18	0.02	5.9	<0.01
JUN 12...	1	2.7	0.3	<0.1	6.4	15	16	0.02	5.6	<0.01
AUG 14...	1.5	2.6	0.6	<0.1	6.2	18	20	0.02	2.2	<0.01

K--Results based on non-ideal colony count.

## TENNESSEE RIVER BASIN

03497300 LITTLE RIVER ABOVE TOWNSEND, TN--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 17...	<0.10	<0.01	<0.01	0.3	0.04	0.02	<0.01	1	0.15	89
DEC 10...	0.21	0.02	<0.01	0.3	<0.01	<0.01	<0.01	<1	--	40
FEB 21...	0.43	0.03	0.04	0.4	--	0.02	0.01	5	6.6	65
APR 10...	0.27	0.04	0.05	0.6	0.02	<0.01	<0.01	1	0.39	60
JUN 12...	0.21	0.03	0.03	0.2	0.02	0.01	<0.01	3	1.1	73
AUG 14...	0.20	0.03	<0.01	0.3	0.03	0.01	0.02	5	0.61	55

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 17...	20	<1	13	<0.5	<1	<1	<3	2	26	<5
FEB 21...	20	<1	9	<0.5	<1	<1	<3	<1	6	<5
JUN 12...	10	<1	10	<0.5	<1	<1	<3	3	15	<5

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 17...	6	2	<0.1	<10	3	<1	<1	12	<6	4
FEB 21...	<4	<1	<0.1	<10	6	<1	<1	10	<6	4
JUN 12...	<4	3	<0.1	<10	1	<1	<1	12	<6	6

DATE	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
FEB 21...	<0.5	<0.6	0.9	<0.6	0.8	<0.6	0.03	<0.02

## 03498500 LITTLE RIVER NEAR MARYVILLE, TN

LOCATION.--Lat 35°47'10", long 83°53'04", Blount County, Hydrologic Unit 06010201, on right bank on downstream side of bridge on U.S. Highway 411, 0.8 mi downstream from Crooked Creek, 5.0 mi east of Maryville, and at mile 17.3.

DRAINAGE AREA.--269 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 850.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 26 to Feb. 1. Records good. Diurnal fluctuations at low flow caused by small mills above station. The town of Maryville diverted an average of about 4.0 ft<sup>3</sup>/s (2.6 MGD) for municipal supply 300 ft upstream from gage. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--35 years, 522 ft<sup>3</sup>/s, 26.35 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,200 ft<sup>3</sup>/s, Mar. 12, 1963, gage height, 24.20 ft, from rating curve extended above 20,000 ft<sup>3</sup>/s, on basis of area-velocity study and road overflow computations; minimum, 32 ft<sup>3</sup>/s, Aug. 27, 1956; minimum gage height, 6.16 ft, Aug. 11, 1980; minimum daily, 44 ft<sup>3</sup>/s, Sept. 19, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 25, 1875, reached a stage of 31 ft, discharge, 50,000 ft<sup>3</sup>/s, and flood of April 1, 1896, reached a stage of 26 ft, discharge, 36,000 ft<sup>3</sup>/s, from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 18	0200	*4,180	*11.36				

Minimum discharge, 36 ft<sup>3</sup>/s, Aug. 6, gage height, 6.08 ft; minimum daily, 48 ft<sup>3</sup>/s, Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	79	83	862	424	200	489	245	186	215	102	61	99	
2	114	89	704	302	224	457	238	179	196	130	62	195	
3	110	113	533	270	284	441	232	170	188	265	58	397	
4	97	426	443	252	331	411	225	165	203	129	54	215	
5	94	800	385	238	376	391	216	159	177	104	50	159	
6	86	385	340	219	418	374	211	157	221	95	49	152	
7	81	441	294	210	372	350	223	154	191	89	48	131	
8	79	415	266	189	325	326	289	164	237	83	57	110	
9	79	344	245	162	301	313	319	146	478	78	71	102	
10	77	298	225	198	285	312	242	139	436	300	62	96	
11	88	308	214	183	351	370	228	137	371	548	76	87	
12	88	316	357	168	312	396	219	135	283	309	163	134	
13	87	283	405	163	273	940	211	138	232	202	92	180	
14	85	237	440	151	278	1240	202	137	203	195	77	116	
15	85	205	367	151	372	1320	199	160	185	169	71	102	
16	120	182	329	145	394	975	194	132	168	139	64	100	
17	125	218	299	143	1210	737	192	135	155	122	105	121	
18	86	227	274	148	3180	603	186	171	141	110	182	98	
19	76	185	245	199	1500	654	181	210	133	102	165	90	
20	74	168	230	248	1020	581	178	286	125	94	112	86	
21	93	161	217	184	785	504	277	185	119	87	112	87	
22	133	389	193	179	660	453	288	152	114	82	118	99	
23	126	391	216	185	603	420	248	192	109	90	103	89	
24	108	313	201	174	539	389	226	250	106	75	90	86	
25	113	271	205	180	509	360	220	287	102	83	79	81	
26	113	241	191	250	458	338	212	266	97	83	74	74	
27	101	224	185	200	539	320	204	495	93	75	93	70	
28	94	262	175	180	540	300	201	395	90	78	121	66	
29	91	760	157	170	---	282	229	408	101	69	156	62	
30	86	1410	150	160	---	268	197	304	100	62	108	61	
31	82	---	228	150	---	255	---	249	---	60	91	---	
TOTAL	2950	10145	9575	6175	16639	15569	6732	6443	5569	4209	2824	3545	
MEAN	95.2	338	309	199	594	502	224	208	186	136	91.1	118	
MAX	133	1410	862	424	3180	1320	319	495	478	548	182	397	
MIN	74	83	150	143	200	255	178	132	90	60	48	61	
CFSM	.35	1.26	1.15	.74	2.21	1.87	.83	.77	.69	.51	.34	.44	
IN.	.41	1.40	1.32	.85	2.30	2.15	.93	.89	.77	.58	.39	.49	
CAL YR 1985	TOTAL	122123		MEAN	335	MAX	9010	MIN	73	CFSM	1.25	IN.	16.89
WTR YR 1986	TOTAL	90375		MEAN	248	MAX	3180	MIN	48	CFSM	.92	IN.	12.50

## 03528000 CLINCH RIVER ABOVE TAZEWEILL, TN

LOCATION.--Lat 36°25'30", long 83°23'54", Claiborne County, Hydrologic Unit 06010205, on right bank 0.4 mi upstream from Grissom Island, 4.6 mi downstream from Big War Creek, 10 mi east of Tazewell, and at mile 159.8.

DRAINAGE AREA.--1,474 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1918 to current year. Published as "near Lone Mountain" October 1918 to September 1927; as "near Tazewell" August 1927 to December 1936; and as "above Tazewell" July 1935 to current year. Prior to April 1919 monthly discharge only, published in WSP 1306. Gage-height record "near Tazewell" January 1937 to July 1941.

REVISED RECORDS.--WSP 803: Drainage area at site "near Tazewell". WSP 1306: Drainage area at site "near Lone Mountain". WSP 1336: 1928.

GAGE.--Water-stage recorder. Datum of gage is 1,060.7 ft above National Geodetic Vertical Datum of 1929. Apr. 1, 1919 to Sept. 30, 1927, nonrecording gage on railroad bridge 23.3 mi downstream at datum 102.7 ft lower. Aug. 8, 1927, to July 16, 1941, water-stage recorder at site 8.0 mi downstream at datum 47.2 ft lower. Water-stage recorder at present site and datum since July 29, 1935.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--68 years, 2,077 ft<sup>3</sup>/s, 19.14 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 98,100 ft<sup>3</sup>/s, Apr. 5, 1977, gage height, 29.32 ft, from floodmarks; minimum, 108 ft<sup>3</sup>/s, Sept. 11, 1925; minimum gage height, at present site and datum, 0.33 ft, Sept. 20, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1862 reached a stage of about 24 ft, present site and datum, from information by local resident; discharge, about 66,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 14,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Feb. 19	0530	*17,700	*10.97	No other peak greater than base discharge.			
Minimum discharge, 178 ft <sup>3</sup> /s, AUG. 7, 8.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	241	242	8980	692	1100	2920	1050	547	1870	304	229	315	
2	279	242	7330	729	1220	2610	996	520	1670	330	216	490	
3	300	273	4680	766	2030	2340	955	497	1320	423	203	738	
4	283	390	3200	743	4940	2140	914	475	1090	374	197	722	
5	287	727	2410	751	6900	1950	867	458	939	388	200	1050	
6	277	2010	2000	721	5660	1790	839	444	836	492	198	1100	
7	269	2580	1730	719	4470	1660	861	430	752	404	187	1130	
8	264	1950	1510	645	5730	1540	824	426	911	339	185	786	
9	262	1450	1330	544	5280	1400	803	416	1030	298	211	627	
10	254	1070	1180	585	3720	1290	787	403	975	294	208	518	
11	245	829	1080	581	2950	1270	758	449	1100	437	268	432	
12	242	682	1040	598	2480	1340	727	576	907	450	402	399	
13	242	589	1060	617	2080	1910	700	804	764	457	352	422	
14	242	532	1200	544	1780	3080	678	875	668	696	372	479	
15	242	490	1380	601	1640	4770	654	3140	598	735	325	459	
16	242	468	1510	542	1540	7310	634	2680	542	541	292	407	
17	239	561	1450	555	2690	6800	620	3080	493	486	260	358	
18	237	602	1320	511	11300	4700	613	3220	453	448	327	332	
19	237	570	1180	540	17000	3720	605	2220	423	391	406	290	
20	237	514	1040	600	14100	3270	601	1790	400	337	309	266	
21	261	475	936	729	11000	2760	622	2370	379	297	411	286	
22	312	743	812	1090	7320	2340	621	2760	359	300	595	355	
23	291	1540	789	1090	5610	2050	601	2180	346	272	440	343	
24	283	1680	811	1170	4670	1840	589	2380	333	250	348	346	
25	303	1310	816	1330	3970	1680	583	2840	328	349	294	368	
26	297	1060	617	1310	3420	1530	577	2830	308	349	265	371	
27	278	1040	750	1220	3100	1420	555	3270	292	335	265	379	
28	267	2890	739	969	3030	1340	546	3280	324	298	306	399	
29	256	6890	690	863	---	1260	575	2950	351	316	328	356	
30	250	9440	695	710	---	1190	567	2550	330	311	285	372	
31	242	---	705	952	---	1110	---	2060	---	259	268	---	
TOTAL	8161	43839	54970	24017	140730	76330	21322	52920	21091	11960	9152	14895	
MEAN	263	1461	1773	775	5026	2462	711	1707	703	386	295	497	
MAX	312	9440	8980	1330	17000	7310	1050	3280	1870	735	595	1130	
MIN	237	242	617	511	1100	1110	546	403	292	250	185	266	
CFSM	.18	.99	1.20	.53	3.41	1.67	.48	1.16	.48	.26	.20	.34	
IN.	.21	1.11	1.39	.61	3.55	1.93	.54	1.34	.53	.30	.23	.38	
CAL YR 1985	TOTAL	526473		MEAN	1442	MAX	19700	MIN	237	CFSM	.98	IN.	13.29
WTR YR 1986	TOTAL	479387		MEAN	1313	MAX	17000	MIN	185	CFSM	.89	IN.	12.10



## TENNESSEE RIVER BASIN

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03535000 BULLRUN CREEK NEAR HALLS CROSSROADS, TN

LOCATION.--Lat 36°06'52", long 83°59'16", Knox County, Hydrologic Unit 06010207, on left bank on downstream side of bridge on U.S. Highway 441, 2.1 mi downstream from Smith Branch, 4 mi northwest of Halls Crossroads, and at mile 16.3.

DRAINAGE AREA.--68.5 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 854.91 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 25-27, 30, 31, Jan. 27 to Feb. 1. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--29 years, 97.8 ft<sup>3</sup>/s, 19.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,300 ft<sup>3</sup>/s, Apr. 4, 1977, gage height, 13.28 ft, from rating curve extended above 5,000 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; minimum, 2.5 ft<sup>3</sup>/s, Aug. 12, 1974, caused by regulation upstream of unknown origin.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Feb. 17	2400	*1,340	*8.31				

Minimum discharge, 4.6 ft<sup>3</sup>/s, Aug. 7, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	12	11	86	30	30	59	36	19	50	13	8.6	9.4	
2	28	11	78	26	31	55	35	18	43	14	8.1	20	
3	21	12	57	25	34	53	33	17	34	16	6.7	50	
4	18	57	47	25	33	49	32	16	28	12	5.9	22	
5	13	18	42	24	71	46	30	16	26	9.8	5.3	19	
6	10	39	39	22	89	44	29	16	24	8.5	4.9	15	
7	9.5	27	33	21	134	41	31	16	21	8.1	4.9	11	
8	8.7	22	30	21	82	38	54	16	19	7.3	5.3	8.6	
9	8.7	18	28	20	62	37	45	15	38	6.8	6.4	8.3	
10	9.0	16	26	22	53	36	35	13	45	20	7.6	8.1	
11	8.7	15	25	21	52	38	32	13	25	22	59	7.2	
12	8.5	15	30	19	44	56	30	13	23	13	31	7.4	
13	8.0	15	34	19	39	155	29	14	22	12	16	8.7	
14	7.6	15	34	18	37	158	27	15	18	104	11	7.9	
15	7.8	14	30	18	42	283	26	13	16	26	9.0	6.3	
16	8.7	15	28	18	47	181	25	12	15	18	8.0	7.7	
17	12	20	27	17	555	122	25	24	13	13	7.6	7.6	
18	9.5	18	25	18	1020	95	24	22	12	11	8.0	6.8	
19	9.0	15	24	53	312	293	23	17	11	9.3	6.9	6.8	
20	8.0	13	23	44	175	174	22	15	11	8.1	6.5	7.1	
21	12	13	25	34	123	120	26	13	11	7.4	6.3	8.4	
22	27	33	25	30	105	95	24	12	9.8	6.5	6.1	11	
23	19	32	24	27	100	80	21	76	9.3	6.2	5.6	8.3	
24	27	25	22	25	90	69	21	142	9.1	5.9	5.7	14	
25	17	21	20	25	83	60	20	122	8.8	5.7	5.3	9.8	
26	14	19	19	37	73	54	20	72	8.1	5.4	4.8	7.5	
27	12	152	19	50	76	51	19	115	8.4	5.5	5.8	6.5	
28	12	236	19	45	68	46	20	92	19	53	12	6.1	
29	11	251	20	40	---	43	27	65	18	19	16	5.9	
30	10	116	19	37	---	40	21	69	11	11	8.2	5.7	
31	10	---	25	35	---	38	---	93	---	8.3	6.4	---	
TOTAL	396.7	1284	983	866	3660	2709	842	1191	606.5	485.8	308.9	328.1	
MEAN	12.8	42.8	31.7	27.9	131	87.4	28.1	38.4	20.2	15.7	9.96	10.9	
MAX	28	251	86	53	1020	293	54	142	50	104	59	50	
MIN	7.6	11	19	17	30	36	19	12	8.1	5.4	4.8	5.7	
CFSM	.19	.62	.46	.41	1.91	1.28	.41	.56	.29	.23	.15	.16	
IN.	.22	.70	.53	.47	1.99	1.47	.46	.65	.33	.26	.17	.18	
CAL YR 1985	TOTAL	17700.4		MEAN	48.5	MAX	1030	MIN	6.8	CFSM	.71	IN.	9.61
WTR YR 1986	TOTAL	13661.0		MEAN	37.4	MAX	1020	MIN	4.8	CFSM	.55	IN.	7.42

## TENNESSEE RIVER BASIN

03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN  
(National stream-quality accounting network station)

LOCATION.--Lat 35°53'07", long 84°18'03", Loudon County, Hydrologic Unit 06010207, at downstream side of Melton Hill Dam, 1.9 mi downstream from Hope Creek, and at mile 23.1.

DRAINAGE AREA.--3,343 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1936 to January 1941 (published as "near Wheat"), February 1941 to September 1960 (published as "near Scarboro"), October 1960 to September 1964 (published as "at Melton Hill Dam"), October 1967 to September 1968 (published as "near Oak Ridge"), October 1978 to current year. Equivalent record for the period October 1964 to December 1978 published in annual reports of Tennessee Valley Authority entitled "Operation of TVA Reservoirs".

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to February 1941, at site 8.7 miles downstream at datum 717.36 ft higher. February 1941 to September 1962 at site 15.9 miles upstream at datum 753.35 ft higher. October 1962 to September 1964, headwater gage at upstream side of dam at present datum. October 1967 to September 1968, at site 8.6 miles downstream at datum 731.62 ft higher.

REMARKS.--Flow regulated by Melton Hill Lake (station 03535900) and Norris Lake (station 03532500) above site.

COOPERATION.--Records furnished by Tennessee Valley Authority.

AVERAGE DISCHARGE.--37 years, (1936-64, 1967-68, 1978-86), 4,592 ft<sup>3</sup>/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 39,600 ft<sup>3</sup>/s, Feb. 18, 1937; minimum daily, no flow, many days since closure of Melton Hill Dam in August 1962.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 9,120 ft<sup>3</sup>/s, Jan. 22; minimum daily, no flow, Nov. 13, 17, Mar. 29, and Apr. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7800	800	1480	3380	2130	383	0	767	3320	3400	2280	2920
2	5170	683	4780	3300	2280	383	1920	1220	4900	3040	1670	4490
3	5350	1280	5570	3450	2070	883	2030	1320	3420	1420	1710	5180
4	4120	1870	5980	3980	5020	1970	400	900	2520	1730	1690	3690
5	3510	2300	3520	4070	5500	6190	833	1520	3480	1790	2080	4020
6	2200	5700	3500	5700	3950	6880	800	754	2170	1860	2730	2700
7	7170	3220	3520	4870	2230	5450	1980	1290	2680	3870	2500	833
8	7620	3470	3500	5480	383	2580	1150	1970	2220	6050	1670	2940
9	7630	1100	1190	3090	383	1450	1150	1980	2500	3410	1670	3540
10	3030	700	1750	3280	2130	5140	1180	2070	2320	2500	1670	5040
11	3700	1100	1600	400	3870	3800	1280	2100	2410	3670	2080	4440
12	400	354	1750	400	5130	4380	1370	2150	2470	1680	2660	4570
13	1180	0	1790	2850	4850	3320	767	2080	1970	1630	2540	2220
14	4870	459	896	5720	6230	750	809	2120	2500	4260	1970	1380
15	2100	88	833	5950	2080	417	854	2430	2020	2890	1670	2800
16	1950	400	2120	4250	2100	417	883	2880	3420	3950	1600	3820
17	1790	0	1750	4220	4420	438	938	2070	2570	5050	1780	4420
18	2500	438	1600	2180	3730	1600	1130	2620	1630	4970	1900	3770
19	417	433	2330	2030	4200	2080	1270	2320	1670	3030	2500	3270
20	417	1630	2230	5680	3270	5170	833	2370	2850	2200	2480	1670
21	2080	2010	3680	6050	2720	5700	817	2630	2650	3410	2920	1670
22	2080	1630	3820	9120	1270	5410	900	2200	2330	2170	2920	2850
23	4070	1580	2550	2630	1080	400	754	2050	5500	3350	1670	4200
24	1520	1000	2770	3350	5230	4330	850	3480	3800	4380	1670	5350
25	467	1130	4050	433	4480	4630	888	3350	2020	4770	2920	5440
26	400	583	3250	450	4690	5630	850	3050	1710	2200	2920	4530
27	400	733	2990	2680	2000	1700	833	2530	3700	2180	4090	4300
28	1000	1600	3480	5420	283	513	783	2660	2200	2430	3990	2530
29	1570	5120	3050	2000	---	0	917	2950	2000	2930	3750	3440
30	530	2040	2480	2430	---	383	1330	5630	1670	3970	2920	4880
31	933	---	4230	1630	---	383	---	4450	---	2770	1670	---
TOTAL	87974	43451	88039	110473	87709	82760	30499	71911	80620	96960	72290	106903
MEAN	2838	1448	2840	3564	3132	2670	1017	2320	2687	3128	2332	3563
MAX	7800	5700	5980	9120	6230	6880	2030	5630	5500	6050	4090	5440
MIN	400	0	833	400	283	0	0	754	1630	1420	1600	833

CAL YR 1985	TOTAL	1122791	MEAN	3076	MAX	12200	MIN	0	MEAN†	3079	CFSM†	0.92	IN†	12.48
WTR YR 1986	TOTAL	959589	MEAN	2629	MAX	9120	MIN	0	MEAN†	2678	CFSM†	0.80	IN†	10.85

† Adjusted for change in contents in Norris and Melton Hill lakes.

NOTE.--Contents (cfs-days) for adjustments furnished by Tennessee Valley Authority.

03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1981 to current year.

WATER TEMPERATURES: March 1981 to current year.

INSTRUMENTATION.--Water-quality monitor since March 21, 1981.

REMARKS.--Flow regulated by Melton Hill and Norris Lakes.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 449 microsiemens, Oct. 28, 1981; minimum, 186 microsiemens, May 29, 1982.

WATER TEMPERATURES: Maximum, 23.5°C, May 17, 1982; minimum, 4.0°C, Jan. 27, 1983, Jan. 21, 22, 1984.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 293 microsiemens, April 1; minimum, 235 microsiemens, Mar. 8.

WATER TEMPERATURES: Maximum, 22.5°C, Aug. 28, 29; minimum, 6.0°C, Jan. 14.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 22...	1030	9000	265	7.90	19.5	746	1.5	7.1	79	K2
DEC 11...	1130	3500	260	8.00	13.0	747	7.0	7.6	74	K7
FEB 20...	1200	8800	255	8.20	8.5	740	5.7	11.2	99	30
APR 09...	1100	250	258	8.20	13.0	743	3.8	10.5	102	K2
JUN 11...	1100	100	267	8.10	17.5	744	1.5	9.2	99	95
AUG 13...	1230	5000	255	7.80	20.5	745	3.7	6.6	75	54

DATE	STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3
OCT 22...	K6	140	20	37	11	6.3	9	0.2	1.5	120
DEC 11...	K1	130	17	35	10	5.3	8	0.2	2.2	113
FEB 20...	170	130	22	35	11	6.2	9	0.2	1.9	108
APR 09...	K6	130	15	35	9.9	5.2	8	0.2	1.7	115
JUN 11...	K7	140	29	36	11	6.6	9	0.3	1.6	111
AUG 13...	K3	130	25	34	10	5.8	9	0.2	1.6	105

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
OCT 22...	3.0	23	4.5	<0.1	3.8	165	160	0.22	4010	0.02
DEC 11...	2.2	24	5.2	<0.1	4.5	155	160	0.21	1460	0.02
FEB 20...	1.4	17	5.2	<0.1	3.1	138	150	0.19	3280	<0.01
APR 09...	1.4	19	5.6	<0.1	2.9	141	150	0.19	95	<0.01
JUN 11...	1.7	27	5.6	<0.1	2.7	157	160	0.21	42	<0.01
AUG 13...	3.2	25	5.4	<0.1	2.9	150	150	0.2	2030	0.02

K--Results based on non-ideal colony count.

## TENNESSEE RIVER BASIN

03535912 CLINCH RIVER AT MILTON HILL DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 22...	0.32	<0.01	<0.01	0.3	0.01	<0.01	<0.01	2	49	79
DEC 11...	0.45	0.03	0.03	0.4	0.04	0.03	0.02	7	66	92
FEB 20...	0.30	0.04	0.02	0.4	0.02	0.02	<0.01	27	642	94
APR 09...	0.23	--	0.03	0.3	<0.01	<0.01	<0.01	13	8.8	49
JUN 11...	0.37	0.05	0.03	0.3	0.02	0.01	<0.01	--	--	--
AUG 13...	0.47	0.07	0.04	0.4	0.05	<0.01	<0.01	10	135	69
DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 22...	<10	<1	40	4	2	<1	<3	2	<3	<5
FEB 20...	20	<1	33	<0.5	<1	<1	<3	1	5	<5
JUN 11...	<10	<1	35	<0.5	<1	<1	<3	2	<3	<5
DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 22...	4	<1	<0.1	<10	<1	<1	<1	110	<6	<3
FEB 20...	8	3	<0.1	<10	1	<1	<1	110	<6	13
JUN 11...	10	2	<0.1	<10	2	<1	<1	110	<6	29



## 03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	271	269	270	269	267	268	276	274	276	271	266	268
2	272	269	271	269	266	268	276	274	275	267	264	265
3	271	268	269	270	269	270	276	274	275	265	261	264
4	272	269	270	270	268	269	276	274	275	265	262	264
5	271	269	270	269	268	268	275	273	274	264	262	263
6	273	269	270	269	268	269	273	272	273	266	262	263
7	272	270	270	269	268	268	273	270	271	265	261	263
8	271	265	265	269	268	268	270	267	268	264	260	262
9	265	264	265	269	268	269	267	264	265	263	260	261
10	266	265	265	269	268	269	266	263	264	264	260	261
11	267	266	266	270	268	269	265	262	264	262	260	261
12	268	267	267	271	269	270	274	263	270	262	258	261
13	268	267	268	272	269	271	277	269	273	263	260	261
14	269	267	268	272	270	271	277	273	275	263	260	261
15	270	268	269	273	271	272	275	270	272	263	258	261
16	271	268	270	272	271	272	271	268	269	261	259	260
17	270	269	269	272	271	272	271	266	269	261	255	259
18	271	269	270	273	271	272	273	269	271	261	257	259
19	271	268	270	273	270	272	274	270	272	260	257	259
20	271	270	270	273	271	272	273	270	272	261	259	260
21	271	268	270	273	270	272	276	271	274	261	257	259
22	270	269	270	272	270	271	278	274	276	261	258	259
23	270	268	269	272	270	271	280	270	278	259	258	258
24	270	268	269	272	271	272	279	268	277	260	257	258
25	270	268	269	273	271	272	278	277	278	259	256	258
26	270	268	269	273	272	273	280	276	278	258	255	257
27	270	269	269	273	269	272	278	275	277	258	256	257
28	270	268	269	275	272	273	278	275	277	259	255	258
29	269	266	268	276	274	274	277	273	276	259	257	258
30	269	266	267	276	274	275	275	271	274	261	257	259
31	269	267	268	---	---	---	273	269	271	261	256	259
MONTH	273	264	269	276	266	271	280	262	273	271	255	261

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	261	258	259	255	251	253	293	254	268	272	259	264
2	261	255	259	254	250	252	280	257	266	263	259	261
3	262	259	260	252	250	251	261	256	258	263	257	260
4	262	257	260	251	249	250	271	257	259	263	255	260
5	260	256	259	251	246	248	260	255	258	268	259	262
6	261	258	260	247	241	244	267	256	260	277	257	264
7	261	259	260	243	237	240	260	255	257	278	259	265
8	262	259	260	238	235	237	261	255	258	272	256	263
9	262	257	260	238	236	237	262	257	259	269	256	261
10	262	258	260	245	237	239	260	252	255	272	255	263
11	262	259	260	254	244	248	257	254	255	276	257	264
12	262	260	261	256	251	253	258	253	255	273	257	265
13	263	260	261	262	256	259	261	256	258	276	258	264
14	262	260	261	264	260	262	262	258	260	278	257	265
15	263	260	261	263	259	261	265	260	262	274	261	265
16	264	260	261	263	261	262	265	262	263	283	263	271
17	262	260	261	263	258	261	264	259	262	281	265	270
18	262	259	261	262	257	260	261	256	259	283	267	272
19	263	258	261	264	247	260	265	257	260	284	269	274
20	263	257	260	265	258	260	264	261	263	288	269	275
21	262	258	260	261	257	259	265	258	262	280	267	272
22	262	257	259	264	260	262	266	264	265	276	264	269
23	260	257	258	264	261	263	264	255	261	282	263	272
24	258	256	257	264	262	263	265	258	261	281	264	269
25	258	255	256	266	261	264	267	261	263	279	262	268
26	258	255	256	266	264	265	267	260	264	281	265	270
27	257	253	255	268	264	266	267	260	264	279	265	270
28	255	253	253	266	263	265	267	258	263	268	265	266
29	---	---	---	266	262	264	264	256	262	267	264	266
30	---	---	---	266	259	264	265	260	262	268	266	266
31	---	---	---	265	258	262	---	---	---	267	265	266
MONTH	264	253	259	268	235	256	293	252	261	288	255	267

## 03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	269	265	266	266	260	263	258	252	256	253	251	253
2	269	263	266	265	259	262	260	256	257	254	251	253
3	271	263	266	271	257	262	260	257	258	255	252	253
4	267	264	266	261	257	259	259	257	258	255	253	254
5	267	264	266	265	257	259	259	256	258	255	254	255
6	267	265	266	260	257	258	259	256	257	256	254	255
7	269	264	266	266	258	260	259	256	257	256	254	255
8	269	266	267	267	257	259	261	257	258	255	253	254
9	270	266	267	263	257	259	262	259	260	254	247	253
10	268	265	267	267	257	260	261	258	260	255	251	253
11	269	267	268	269	259	261	260	258	259	256	254	255
12	270	267	268	265	259	261	259	256	257	258	253	256
13	273	267	269	268	259	261	257	254	256	258	252	256
14	272	266	268	264	258	260	258	256	257	256	253	254
15	271	265	267	263	256	258	259	257	258	256	253	255
16	269	263	266	261	256	258	259	257	258	256	254	255
17	269	261	264	261	252	256	259	256	257	256	253	255
18	268	260	263	259	251	255	258	255	257	259	253	255
19	264	260	261	255	252	254	258	253	255	258	254	256
20	265	260	262	256	253	254	255	249	254	258	254	257
21	266	260	262	257	253	254	257	254	256	259	257	258
22	267	259	263	256	252	253	256	254	255	260	258	259
23	267	261	263	256	252	253	258	255	256	258	256	257
24	266	260	262	255	251	253	259	256	257	258	257	258
25	268	260	262	253	250	252	256	254	255	259	255	257
26	268	260	262	255	251	253	257	254	255	259	256	258
27	268	259	262	256	253	254	256	253	255	259	258	259
28	263	261	262	261	254	258	256	249	253	260	256	259
29	267	260	263	261	257	259	251	249	250	261	259	260
30	265	261	262	259	257	258	252	250	251	261	257	259
31	---	---	---	258	256	257	255	252	254	---	---	---
MONTH	273	259	265	271	250	258	262	249	256	261	247	256

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	19.0	18.5	19.0	19.5	19.0	19.5	16.5	16.5	16.5	7.0	6.5	7.0
2	19.0	18.5	19.0	19.5	19.0	19.5	16.5	16.0	16.0	7.0	6.5	7.0
3	19.0	18.5	19.0	19.0	19.0	19.0	16.0	15.0	15.5	7.5	6.5	7.0
4	19.0	18.5	18.5	18.5	18.0	18.5	15.5	15.0	15.5	7.0	6.5	7.0
5	18.5	18.0	18.5	18.5	17.5	18.0	15.0	15.0	15.0	7.0	6.5	7.0
6	18.5	17.5	18.0	18.0	17.5	18.0	15.0	14.5	14.5	7.5	6.5	7.0
7	18.5	18.0	18.0	18.0	17.5	17.5	14.5	14.0	14.0	7.5	6.5	7.0
8	18.0	18.0	18.0	18.0	17.0	17.5	14.0	13.5	14.0	7.0	6.5	6.5
9	18.0	17.5	17.5	17.5	16.5	17.0	14.5	13.5	14.0	7.5	6.5	7.0
10	18.0	17.5	18.0	17.0	16.5	17.0	13.5	13.5	13.5	7.5	7.0	7.0
11	18.5	18.0	18.0	17.5	16.5	17.0	13.5	13.0	13.0	7.5	6.5	7.0
12	19.0	18.5	18.5	17.0	16.5	16.5	13.5	13.0	13.0	8.0	7.0	7.0
13	19.5	18.5	19.0	17.0	16.0	16.5	13.0	12.0	12.5	7.5	6.5	7.0
14	19.0	18.5	19.0	17.0	16.5	16.5	12.5	11.0	12.0	7.5	6.0	7.0
15	19.0	19.0	19.0	17.0	16.5	16.5	12.0	10.5	11.5	7.5	7.0	7.0
16	20.0	19.0	19.5	17.0	16.5	16.5	12.0	11.0	11.5	7.5	7.0	7.5
17	20.0	19.5	19.5	17.0	16.5	16.5	12.0	11.5	11.5	8.0	7.0	7.5
18	20.0	19.5	19.5	17.0	16.5	16.5	11.5	10.5	11.0	8.0	7.5	7.5
19	20.0	19.5	19.5	17.0	16.5	16.5	11.0	10.5	10.5	8.5	7.5	7.5
20	20.5	19.5	20.0	16.5	16.0	16.5	10.5	9.5	10.5	8.0	7.0	7.5
21	20.0	19.5	20.0	16.5	16.0	16.5	10.0	9.5	10.0	8.0	7.5	8.0
22	20.0	19.5	20.0	17.0	16.5	16.5	9.5	9.0	9.5	8.0	7.5	8.0
23	20.0	19.5	20.0	16.5	16.0	16.0	10.0	9.0	9.5	8.5	8.0	8.0
24	20.0	20.0	20.0	16.5	16.0	16.0	9.5	8.5	9.0	8.5	8.0	8.0
25	20.5	19.5	20.0	17.0	16.0	16.5	8.5	8.0	8.0	8.5	8.0	8.0
26	20.5	19.5	19.5	16.5	16.0	16.5	8.0	7.5	8.0	8.5	7.5	8.0
27	20.0	19.5	19.5	16.5	16.5	16.5	8.0	7.0	8.0	7.5	6.5	7.0
28	20.0	19.5	19.5	16.5	16.5	16.5	8.0	7.5	7.5	7.5	7.0	7.0
29	20.0	19.5	19.5	16.5	16.5	16.5	7.5	7.0	7.0	7.5	7.0	7.0
30	20.0	19.0	19.5	17.0	16.5	16.5	7.5	7.0	7.0	8.0	7.0	7.0
31	19.5	19.0	19.0	---	---	---	7.5	7.0	7.0	8.0	6.5	7.5
MONTH	20.5	17.5	19.0	19.5	16.0	17.0	16.5	7.0	11.5	8.5	6.0	7.5

## 03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN--Continued

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	8.0	7.0	7.5	9.0	7.5	8.0	18.0	13.5	15.5	17.5	15.5	16.0
2	8.0	6.5	7.0	9.0	8.0	8.5	16.5	12.5	14.5	18.5	16.0	16.5
3	7.0	6.5	6.5	9.0	8.0	8.5	14.5	12.5	13.0	17.5	16.0	16.5
4	7.0	6.5	6.5	9.0	8.0	8.5	15.5	13.0	13.5	19.0	16.5	17.5
5	8.0	6.5	7.0	10.0	8.0	8.5	15.0	12.5	13.5	17.5	16.5	17.0
6	7.5	7.0	7.0	9.0	8.5	9.0	15.0	12.5	13.5	17.5	16.5	17.0
7	7.5	7.0	7.0	9.0	8.5	9.0	14.5	13.0	13.5	20.0	16.5	17.5
8	8.5	7.0	7.5	10.0	8.5	9.5	15.0	12.5	13.5	19.5	17.5	18.0
9	8.0	7.5	8.0	10.5	9.0	9.5	13.0	12.0	13.0	19.5	18.0	18.5
10	8.5	7.5	8.0	10.0	9.0	9.5	15.0	12.5	14.0	19.5	18.0	18.5
11	8.0	8.0	8.0	11.0	9.5	10.0	15.5	13.5	14.5	19.0	18.0	18.5
12	8.0	7.5	8.0	11.0	10.0	10.5	15.5	13.5	15.0	19.5	18.0	18.5
13	8.5	7.5	8.0	10.5	9.5	10.0	15.5	14.0	15.0	19.5	18.5	19.0
14	8.0	8.0	8.0	10.5	10.0	10.0	15.0	14.0	14.5	21.0	18.5	19.0
15	8.5	7.5	8.0	11.0	10.0	10.5	16.0	13.0	14.5	19.5	18.5	19.0
16	9.0	8.0	8.5	11.5	10.0	11.0	13.5	12.5	13.0	20.0	18.5	19.0
17	10.0	8.5	8.5	13.0	10.0	11.5	14.0	13.0	13.5	20.0	19.0	19.0
18	9.0	8.0	8.5	12.0	10.5	11.5	16.5	13.5	15.0	20.0	19.0	19.5
19	9.0	7.5	8.0	12.0	10.0	10.5	17.5	14.5	16.0	19.5	18.5	19.0
20	9.0	7.5	8.0	11.0	10.0	10.5	16.5	14.5	15.5	19.5	18.5	19.0
21	8.5	7.0	8.0	12.0	11.0	11.0	15.0	13.5	14.5	19.5	19.0	19.0
22	8.0	7.5	8.0	12.0	11.0	11.0	14.5	13.5	14.0	21.5	18.5	19.5
23	9.0	7.5	8.5	13.5	11.0	11.5	16.0	14.0	15.0	19.5	19.0	19.0
24	9.0	8.0	8.5	12.0	11.0	11.5	17.0	14.0	15.5	19.5	19.0	19.0
25	9.5	8.0	8.5	13.0	11.5	12.0	17.5	14.5	16.0	19.5	19.0	19.0
26	8.5	8.0	8.5	12.0	11.5	12.0	20.0	15.0	16.0	19.0	18.5	19.0
27	9.0	8.0	8.5	14.5	11.5	12.5	18.0	15.5	16.0	19.0	18.0	18.5
28	9.0	8.0	8.0	14.0	11.5	12.5	16.5	15.0	16.0	19.5	18.0	18.5
29	---	---	---	14.5	12.5	13.5	17.5	15.5	16.5	19.0	17.5	18.0
30	---	---	---	15.0	12.5	13.5	19.0	15.5	16.5	18.5	18.0	18.0
31	---	---	---	16.0	12.5	14.0	---	---	---	19.0	18.0	18.5
MONTH	10.0	6.5	8.0	16.0	7.5	10.5	20.0	12.0	14.5	21.5	15.5	18.5

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	19.0	18.0	18.5	19.5	19.0	19.0	20.0	19.0	19.5	21.0	20.5	20.5
2	19.0	18.0	18.5	19.5	18.5	19.0	20.0	19.0	19.5	20.5	20.0	20.5
3	19.0	18.0	18.5	20.0	18.5	19.0	19.5	19.0	19.0	20.5	19.5	20.5
4	18.5	17.5	18.0	20.0	19.5	19.5	20.0	18.5	19.0	20.0	20.0	20.0
5	18.0	17.5	17.5	20.0	19.5	19.5	19.5	19.0	19.0	20.0	19.5	20.0
6	18.5	17.0	17.5	20.5	20.0	20.0	19.5	19.0	19.0	20.0	19.0	19.5
7	18.5	16.5	17.5	20.0	19.5	20.0	20.0	19.0	19.5	19.5	19.0	19.0
8	18.5	16.5	17.0	20.5	19.5	20.0	19.5	19.0	19.5	19.0	18.5	19.0
9	18.0	17.0	17.5	21.0	20.0	20.5	19.5	19.0	19.0	19.0	18.5	19.0
10	18.5	17.0	17.5	21.0	19.5	20.5	20.0	19.0	19.5	19.0	18.5	19.0
11	18.0	17.0	17.5	21.0	19.5	20.0	19.5	19.0	19.0	19.0	18.5	18.5
12	17.5	16.5	17.0	20.5	20.0	20.0	20.0	19.5	19.5	18.5	18.0	18.5
13	17.5	16.5	17.0	20.5	19.5	20.0	21.5	20.0	20.5	19.5	18.0	18.5
14	18.5	17.5	18.0	20.0	19.5	19.5	21.0	20.5	20.5	19.5	19.0	19.0
15	18.5	18.0	18.0	20.5	19.5	20.0	21.5	20.5	21.0	19.0	18.5	19.0
16	19.0	18.0	18.5	20.0	19.5	19.5	21.0	20.5	21.0	19.0	18.5	18.5
17	19.0	18.5	18.5	21.0	19.0	20.0	21.5	20.5	21.0	19.5	18.5	19.0
18	20.0	18.5	19.0	21.5	20.0	20.5	22.0	21.0	21.0	19.5	18.5	19.0
19	20.0	19.0	19.5	21.0	20.0	20.5	22.0	21.0	21.5	19.5	18.5	19.0
20	19.5	19.0	19.0	20.5	19.5	20.0	22.0	21.5	21.5	19.5	18.5	19.0
21	20.0	19.0	19.5	20.0	19.5	19.5	21.5	21.0	21.5	19.0	18.5	18.5
22	20.5	19.0	20.0	20.5	19.5	20.0	22.0	21.0	21.5	19.0	18.5	18.5
23	20.0	19.0	19.5	20.0	19.5	20.0	22.0	21.5	21.5	19.0	18.5	18.5
24	19.5	19.0	19.5	20.5	19.5	20.0	22.0	21.0	21.5	19.0	18.5	18.5
25	20.0	19.5	19.5	20.5	20.0	20.0	22.0	21.0	21.5	19.5	18.5	19.0
26	20.5	19.5	19.5	20.0	19.5	19.5	21.5	21.0	21.5	19.5	18.5	19.0
27	20.0	19.5	20.0	20.5	19.0	19.5	22.0	21.0	21.5	19.0	19.0	19.0
28	20.5	19.0	19.5	19.5	19.0	19.0	22.5	21.0	22.0	19.5	18.5	19.0
29	20.0	19.0	19.5	20.0	18.5	19.0	22.5	21.5	21.5	19.0	18.5	18.5
30	19.5	19.0	19.5	19.5	19.0	19.5	22.0	21.0	21.5	19.0	18.5	18.5
31	---	---	---	20.0	19.0	19.5	21.5	21.0	21.0	---	---	---
MONTH	20.5	16.5	18.5	21.5	18.5	20.0	22.5	18.5	20.5	21.0	18.0	19.0



## TENNESSEE RIVER BASIN

03536550 WHITEOAK CREEK BELOW MELTON VALLEY DRIVE NEAR OAK RIDGE, TN

LOCATION.--Lat 35°55'10", long 84°19'02", Roane County, Hydrologic Unit 06010207, on right bank 200 ft downstream of bridge on Melton Valley Drive at Oak Ridge National Laboratory, 6.7 mi southwest of Oak Ridge, and at mile 2.2.

DRAINAGE AREA.--3.28 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1985 to current year.

GAGE.--Water-stage recorder, and crest-stage gage. Datum of gage is 766.35 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges, water year 1985: Apr. 1-19. Records fair.

No estimated daily discharge, water year 1986. Records fair. Flow regulated at times by Oak Ridge National Laboratory. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 360 ft<sup>3</sup>/s, Aug. 16, 1985, gage height, 6.43 ft; minimum, 4.8 ft<sup>3</sup>/s, Apr. 26, 1985, gage height, 2.41 ft.

EXTREMES FOR CURRENT PERIOD.--April to September 1985: Maximum discharge, 360 ft<sup>3</sup>/s, Aug. 16, gage height, 6.43 ft; minimum, 4.8 ft<sup>3</sup>/s, Apr. 26, gage height, 2.41 ft.

Water Year 1986: Maximum discharge, 250 ft<sup>3</sup>/s, Mar. 19, gage height, 5.60 ft; minimum, 5.1 ft<sup>3</sup>/s, many days; gage height, 2.42 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR APRIL 1985 TO SEPTEMBER 1985  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							6.8	6.5	6.4	9.8	9.3	10
2							6.7	13	6.6	7.4	7.9	9.2
3							6.5	9.3	7.0	7.2	7.4	8.6
4							6.5	7.2	6.9	6.9	7.0	8.6
5							12	6.3	7.0	6.5	6.9	8.5
6							18	6.9	7.3	7.6	9.2	9.6
7							13	7.3	13	6.3	8.2	7.9
8							9.0	7.1	7.7	6.3	7.4	8.1
9							8.0	6.8	7.0	8.2	7.4	7.6
10							7.5	7.0	7.2	10	6.7	7.9
11							7.2	7.1	7.1	8.9	6.8	7.6
12							7.0	6.5	11	7.2	6.8	6.9
13							6.8	6.9	6.8	6.8	7.1	6.7
14							8.0	7.0	6.6	6.9	6.9	6.4
15							11	6.8	6.5	7.9	6.7	6.4
16							11	6.6	6.5	6.9	41	6.7
17							9.8	6.8	7.7	6.9	71	6.5
18							9.5	6.5	9.9	7.2	21	6.4
19							9.0	6.6	6.9	6.9	13	6.4
20							8.0	6.8	6.6	7.0	11	6.3
21							7.6	7.7	6.6	7.0	9.5	5.9
22							7.8	6.8	6.4	7.3	9.0	6.2
23							7.6	6.9	6.3	14	8.4	7.5
24							7.4	6.8	7.1	9.8	20	7.7
25							7.2	6.4	6.5	7.7	20	6.7
26							7.0	6.4	8.4	8.8	23	7.2
27							6.8	6.4	7.0	12	16	6.6
28							6.7	7.1	6.5	9.9	12	6.4
29							6.7	6.8	6.7	8.9	11	6.3
30							6.3	6.7	12	9.9	14	6.4
31							---	6.7	---	8.6	11	---
TOTAL							252.4	219.7	225.2	252.7	422.6	219.2
MEAN							8.41	7.09	7.51	8.15	13.6	7.31
MAX							18	13	13	14	71	10
MIN							6.3	6.3	6.3	6.3	6.7	5.9
CFSM							2.56	2.16	2.29	2.48	4.15	2.23
IN.							2.86	2.49	2.55	2.87	4.79	2.49



TENNESSEE RIVER BASIN

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03536550 WHITEOAK CREEK BELOW MELTON VALLEY DRIVE NEAR OAK RIDGE, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	13	10	14	8.0	6.9	8.1	8.0	6.8	6.8	8.6	7.2	7.4	
2	8.2	9.6	11	7.5	7.2	8.1	7.7	6.6	6.8	11	6.8	14	
3	7.2	7.6	9.5	7.2	7.3	7.8	7.7	5.8	6.8	7.0	6.7	8.4	
4	7.1	10	9.0	6.9	6.9	7.4	7.5	5.9	6.4	6.8	6.8	7.9	
5	6.5	8.1	8.8	6.6	15	7.9	6.8	6.2	8.9	6.4	6.9	9.4	
6	6.3	7.7	8.0	6.6	12	7.7	6.8	6.3	7.4	6.3	7.2	7.1	
7	6.4	7.4	7.1	6.7	12	7.3	7.0	6.5	6.8	6.1	6.6	6.4	
8	6.4	6.8	7.1	6.5	10	7.3	9.2	6.6	6.1	6.2	7.0	6.2	
9	6.5	6.3	7.1	6.2	9.5	7.2	7.1	6.4	9.2	6.8	6.3	6.3	
10	6.4	6.3	7.0	6.6	9.9	7.3	6.7	6.0	7.4	8.6	6.5	6.5	
11	6.5	6.6	8.2	6.4	10	8.2	6.9	6.0	6.9	6.7	9.7	6.6	
12	6.2	6.8	9.0	6.5	8.5	14	6.6	6.4	6.8	6.2	6.7	8.6	
13	5.9	6.7	11	6.4	7.8	19	6.6	6.6	6.6	9.5	6.8	6.4	
14	6.6	6.7	8.0	6.5	9.2	14	6.7	6.4	6.3	8.8	6.7	6.1	
15	7.1	6.4	7.6	6.4	10	12	6.9	6.5	6.3	7.2	6.6	6.4	
16	6.3	7.1	7.6	6.4	11	11	6.5	6.6	6.3	6.7	6.6	7.4	
17	6.4	6.4	7.5	6.6	63	10	6.6	5.8	6.5	6.6	6.7	6.5	
18	6.4	6.4	7.4	7.0	54	10	6.8	6.8	6.2	7.3	6.7	6.4	
19	6.5	6.4	7.1	10	25	41	6.6	6.4	6.0	6.8	7.0	6.6	
20	6.3	6.3	7.1	7.4	17	18	6.9	6.3	6.4	6.8	10	6.5	
21	8.5	8.0	6.5	6.9	14	13	7.6	6.1	6.3	7.3	6.9	6.2	
22	6.8	8.5	6.5	6.7	13	11	6.7	6.3	5.8	6.8	7.0	6.5	
23	10	6.7	6.7	7.1	10	10	6.3	10	6.3	7.2	6.3	6.9	
24	7.8	6.4	6.4	6.6	12	9.8	6.4	9.3	6.7	6.8	6.3	6.4	
25	6.7	6.7	6.2	7.8	10	9.5	6.3	8.4	6.3	6.6	6.6	6.3	
26	6.3	6.9	6.0	9.3	9.7	9.0	6.6	7.5	6.5	6.6	10	6.3	
27	6.3	18	6.1	8.1	9.8	8.5	6.3	8.9	6.5	6.7	11	6.5	
28	6.7	27	6.1	7.8	8.6	8.2	7.8	12	6.4	6.7	9.1	6.2	
29	6.6	18	6.0	7.9	---	7.8	6.6	7.8	7.5	6.9	6.5	6.3	
30	6.6	13	5.8	7.0	---	7.7	6.6	7.3	6.6	6.6	6.5	6.2	
31	6.5	---	11	6.6	---	8.0	---	6.8	---	7.1	6.1	---	
TOTAL	217.0	264.8	242.4	220.2	399.3	335.8	208.8	217.3	201.8	221.7	223.8	210.9	
MEAN	7.00	8.83	7.82	7.10	14.3	10.8	6.96	7.01	6.73	7.15	7.22	7.03	
MAX	13	27	14	10	63	41	9.2	12	9.2	11	11	14	
MIN	5.9	6.3	5.8	6.2	6.9	7.2	6.3	5.8	5.8	6.1	6.1	6.1	
CFSM	2.13	2.69	2.38	2.16	4.36	3.29	2.12	2.14	2.05	2.18	2.20	2.14	
IN.	2.46	3.00	2.75	2.50	4.53	3.81	2.37	2.46	2.29	2.51	2.54	2.39	
WTR YR 1986	TOTAL	2963.8		MEAN	8.12	MAX	63	MIN	5.8	CFSM	2.48	IN.	33.61

## TENNESSEE RIVER BASIN

03537100 MELTON BRANCH NEAR MELTON HILL, NEAR OAK RIDGE, TN

LOCATION.--Lat 35°54'59", long 84°17'53", Roane County, Hydrologic Unit 06010207, on left bank 1.0 mi southeast of the Oak Ridge National Laboratory, 6.0 mi south of Oak Ridge, and at mile 1.2.

DRAINAGE AREA.--0.52 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 784.06 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges, water year 1985: Apr. 1-19, 29, 30. Records fair.

Estimated daily discharges, water year 1986: May 8-15, June 12-16. Records fair.

Periodic observations of water temperature are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 132 ft<sup>3</sup>/s, Aug. 16, 1985 and Mar. 19, 1986, gage height, 9.64 ft; no flow many days each year.

EXTREMES FOR CURRENT PERIOD.--April to September 1985: Maximum discharge, 132 ft<sup>3</sup>/s, Aug. 16, gage height, 9.64 ft; no flow several days.

Water year 1986: Maximum discharge, 132 ft<sup>3</sup>/s, Mar. 19, gage height, 9.64 ft; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR APRIL 1985 TO SEPTEMBER 1985  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							.50	.10	.01	.18	.12	.11
2							.45	.86	.01	.04	.06	.06
3							.38	.71	.01	.02	.03	.05
4							.30	.24	.01	.01	.01	.04
5							.60	.15	.00	.01	.01	.03
6							1.2	.11	.00	.01	.06	.06
7							.95	.11	.19	.01	.22	.05
8							.80	.13	.07	.00	.09	.03
9							.70	.12	.02	.00	.03	.02
10							.60	.12	.01	.05	.02	.02
11							.55	.22	.01	.15	.01	.02
12							.45	.22	.08	.02	.01	.01
13							.40	.11	.02	.01	.01	.01
14							.35	.08	.01	.01	.01	.01
15							.82	.06	.01	.01	.01	.01
16							.80	.04	.00	.01	6.5	.01
17							.60	.06	.02	.00	15	.01
18							.47	.05	.22	.00	1.9	.01
19							.35	.03	.05	.00	.63	.01
20							.31	.03	.02	.00	.28	.01
21							.24	.05	.01	.00	.17	.00
22							.20	.04	.01	.00	.09	.00
23							.18	.03	.01	.16	.07	.01
24							.17	.05	.01	.32	.68	.08
25							.16	.04	.01	.14	.88	.02
26							.16	.02	.01	.04	1.4	.04
27							.12	.02	.01	.31	1.3	.03
28							.11	.03	.01	.14	.54	.02
29							.10	.03	.00	.12	.25	.02
30							.10	.02	.11	.15	.37	.01
31							---	.01	---	.08	.25	---
TOTAL							13.12	3.89	.96	2.00	31.01	.81
MEAN							.44	.13	.03	.06	1.00	.03
MAX							1.2	.86	.22	.32	15	.11
MIN							.10	.01	.00	.00	.01	.00
CFSM							.85	.25	.06	.12	1.92	.05
IN.							.94	.28	.07	.14	2.22	.06

## TENNESSEE RIVER BASIN

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03537100 MELTON BRANCH NEAR MELTON HILL, NEAR OAK RIDGE, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	.39	.23	1.1	.68	.32	.39	.24	.05	.02	.01	.00	.00	
2	.27	.73	1.0	.39	.29	.36	.22	.04	.02	.07	.00	.01	
3	.27	.28	.57	.31	.33	.33	.22	.03	.01	.03	.00	.01	
4	.15	.79	.40	.23	.27	.32	.19	.03	.01	.02	.00	.00	
5	.08	.74	.38	.19	1.6	.27	.17	.03	.03	.01	.00	.00	
6	.05	.35	.30	.18	1.1	.28	.17	.03	.03	.01	.00	.01	
7	.04	.25	.22	.17	.87	.24	.18	.03	.01	.01	.00	.00	
8	.04	.17	.18	.17	.60	.22	.60	.02	.01	.01	.00	.00	
9	.03	.13	.16	.17	.48	.22	.27	.02	.09	.01	.00	.00	
10	.03	.11	.13	.19	.51	.22	.20	.02	.05	.01	.00	.00	
11	.03	.10	.27	.17	.93	.27	.17	.02	.03	.06	.00	.00	
12	.03	.10	.58	.16	.60	.83	.15	.02	.02	.04	.00	.00	
13	.03	.10	1.2	.15	.46	2.5	.13	.02	.02	.10	.00	.00	
14	.03	.09	.70	.14	.61	1.5	.13	.02	.01	.20	.00	.00	
15	.03	.10	.45	.13	.59	1.1	.12	.02	.01	.02	.00	.00	
16	.03	.18	.34	.13	.92	.80	.10	.01	.01	.01	.00	.00	
17	.02	.21	.28	.13	14	.62	.10	.01	.01	.00	.00	.00	
18	.02	.15	.22	.13	7.9	.52	.09	.01	.01	.00	.00	.00	
19	.02	.13	.17	.65	2.1	13	.07	.02	.01	.00	.00	.00	
20	.02	.10	.17	.31	1.3	1.9	.08	.02	.01	.00	.00	.00	
21	.21	.22	.13	.30	1.0	1.2	.21	.02	.00	.00	.00	.00	
22	.09	.49	.14	.25	.90	.88	.15	.02	.00	.00	.00	.00	
23	.41	.32	.13	.20	.73	.69	.09	.11	.00	.00	.00	.00	
24	.39	.21	.12	.20	.86	.56	.07	.06	.00	.00	.00	.00	
25	.17	.16	.10	.25	.70	.48	.07	.15	.00	.00	.00	.00	
26	.11	.13	.10	.86	.63	.43	.06	.07	.00	.00	.00	.00	
27	.08	1.1	.10	.75	.64	.37	.06	.24	.00	.00	.00	.00	
28	.11	3.3	.10	.65	.46	.32	.16	.38	.00	.00	.00	.00	
29	.08	2.2	.10	.50	---	.28	.09	.12	.00	.00	.00	.00	
30	.07	1.2	.10	.41	---	.27	.05	.05	.00	.00	.00	.00	
31	.07	---	.73	.37	---	.27	---	.03	---	.00	.00	---	
TOTAL	3.40	14.37	10.67	9.52	41.70	31.64	4.61	1.72	.42	.62	.00	.03	
MEAN	.11	.48	.34	.31	1.49	1.02	.15	.05	.01	.02	.00	.00	
MAX	.41	3.3	1.2	.86	.14	.13	.60	.38	.09	.20	.00	.01	
MIN	.02	.09	.10	.13	.27	.22	.05	.01	.00	.00	.00	.00	
CFSM	.21	.92	.65	.60	2.87	1.96	.29	.11	.03	.04	.00	.00	
IN.	.24	1.03	.76	.68	2.98	2.26	.33	.12	.03	.04	.00	.00	
WTR YR 1986	TOTAL	118.70		MEAN	.33	MAX	14	MIN	.00	CFSM	.63	IN.	8.49

## TENNESSEE RIVER BASIN

03538225 POPLAR CREEK NEAR OAK RIDGE, TN

LOCATION.--Lat 35°59'55", long 84°20'23", Roane County, Hydrologic Unit 06010207, on right bank, 1,000 ft upstream from county road bridge, 0.4 mi downstream from Indian Creek, 8.2 mi southwest of intersection of State Highways 95 and 62 in Oak Ridge, and at mile 13.8.

DRAINAGE AREA.--82.5 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 743.50 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: June 4-24, Sept. 20-30. Records good, except for periods of estimated daily record, which are fair. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--26 years, 169 ft<sup>3</sup>/s, 27.82 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft<sup>3</sup>/s, Apr. 5, 1977, gage height, 27.93 ft, from floodmark from rating curve extended above 8,000 ft<sup>3</sup>/s; minimum, 3.7 ft<sup>3</sup>/s, July 31, Aug. 5, 6, 1986.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 29, 1928, at site about 5.0 mi upstream, drainage area, 55.9 mi<sup>2</sup>, discharge, about 14,000 ft<sup>3</sup>/s, was the greatest known since at least 1900, from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 18	0800	*3,430	*17.71	No other peak greater than base discharge.			

Minimum discharge, 3.7 ft<sup>3</sup>/s, July 31, Aug. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	43	25	222	118	60	111	63	37	38	13	6.5	13	
2	73	37	192	92	61	103	62	34	164	17	5.2	43	
3	41	43	139	89	70	99	59	31	75	24	4.7	57	
4	35	57	121	80	64	94	55	29	60	14	5.0	23	
5	28	103	113	75	250	87	51	30	55	11	4.2	20	
6	23	63	103	65	339	82	51	27	100	10	4.3	35	
7	20	49	85	62	303	78	54	29	80	9.9	10	17	
8	19	44	78	52	214	70	112	30	70	8.2	11	13	
9	18	36	72	45	168	64	101	26	60	7.7	8.4	9.7	
10	18	34	66	49	145	63	82	24	70	8.0	7.3	9.2	
11	17	32	63	47	142	68	74	21	60	10	51	8.5	
12	17	28	98	46	106	73	68	22	50	24	24	11	
13	17	28	136	44	90	121	63	22	40	16	13	12	
14	19	27	151	40	95	126	60	23	35	37	9.3	10	
15	18	26	133	39	115	131	57	22	30	45	8.5	9.5	
16	19	30	117	36	128	115	49	19	25	20	7.7	13	
17	18	75	103	36	1210	105	48	20	20	21	8.1	12	
18	16	54	91	36	3030	97	48	23	17	14	7.8	11	
19	16	45	75	87	878	462	44	29	15	11	7.4	11	
20	18	38	72	73	400	335	44	23	14	9.2	6.3	15	
21	27	45	67	58	282	214	72	18	13	9.0	5.8	19	
22	34	134	58	52	226	165	63	17	12	7.7	6.0	21	
23	34	111	62	49	189	140	49	98	11	7.7	6.9	15	
24	64	85	59	45	178	121	44	127	10	7.9	6.6	25	
25	40	69	54	48	162	106	42	62	9.7	7.3	5.7	20	
26	30	59	44	74	145	96	41	45	8.6	8.2	5.3	18	
27	24	321	45	77	148	91	39	90	8.9	7.2	9.7	15	
28	23	528	44	81	131	83	43	82	9.7	7.0	20	13	
29	23	808	41	73	---	78	53	67	11	6.3	13	11	
30	22	315	37	72	---	73	40	53	15	5.2	9.5	10	
31	22	---	77	63	---	68	---	47	---	5.5	7.3	---	
TOTAL	836	3349	2818	1903	9329	3719	1731	1227	1186.9	409.0	305.5	519.9	
MEAN	27.0	112	90.9	61.4	333	120	57.7	39.6	39.6	13.2	9.85	17.3	
MAX	73	808	222	118	3030	462	112	127	164	45	51	57	
MIN	16	25	37	36	60	63	39	17	8.6	5.2	4.2	8.5	
CFSM	.33	1.36	1.10	.74	4.04	1.45	.70	.48	.48	.16	.12	.21	
IN.	.38	1.51	1.27	.86	4.21	1.68	.78	.55	.54	.18	.14	.23	
CAL YR 1985	TOTAL	38320		MEAN	105	MAX	1490	MIN	16	CFSM	1.27	IN.	17.28
WTR YR 1986	TOTAL	27333.3		MEAN	74.9	MAX	3030	MIN	4.2	CFSM	.91	IN.	12.32



## 03538250 EAST FORK POPLAR CREEK NEAR OAK RIDGE, TN

LOCATION.--Lat 35°57'58", long 84°21'30", Roane County, Hydrologic Unit 06010207, near left bank, on upstream side of county road bridge, 0.3 mi north of State Highway 95, 1.7 mi upstream from Bear Creek, 5.8 mi southwest of intersection of State Highways 95 and 62 in Oak Ridge, and at mile 3.3.

DRAINAGE AREA.--19.5 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 754.16 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow includes effect of operations of the Department of Energy's Y-12 Plant, which may add up to 20 ft<sup>3</sup>/s, and the west end sewage treatment plant of the City of Oak Ridge, which may add up to 10 ft<sup>3</sup>/s. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--26 years, 50.7 ft<sup>3</sup>/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,100 ft<sup>3</sup>/s, Nov. 28, 1973, gage height, 16.0 ft, from floodmarks, backwater from low steel on bridge, on basis of runoff comparison with nearby stations; minimum daily, 12 ft<sup>3</sup>/s, July 1, 1982.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 29, 1944, the greatest known since 1900, reached a discharge of about 4,600 ft<sup>3</sup>/s, at site 5.1 mi upstream, from report of the Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Feb. 17	1930	*812	*6.87	No other peak greater than base discharge.			

Minimum daily discharge, 17 ft<sup>3</sup>/s, several days in July, August.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	26	74	42	27	39	32	22	21	19	20	27
2	43	38	66	34	26	36	31	22	34	42	17	64
3	34	27	50	32	29	35	30	21	22	23	18	47
4	26	45	44	30	27	35	30	21	22	18	17	25
5	24	45	41	28	98	33	29	21	21	18	17	38
6	22	33	38	28	65	32	30	21	50	17	17	31
7	21	30	33	27	66	31	31	21	23	17	21	20
8	21	28	31	27	47	29	55	22	21	18	19	20
9	21	26	30	26	41	28	35	21	27	18	18	20
10	21	24	28	26	39	28	31	20	24	25	17	20
11	21	25	29	26	46	33	27	21	21	33	45	20
12	20	25	37	24	37	42	26	21	21	19	20	27
13	20	25	52	24	35	76	27	21	20	21	19	20
14	21	25	40	25	39	56	29	21	19	43	19	19
15	21	24	34	24	48	57	25	21	18	34	19	18
16	21	27	33	24	54	45	25	20	18	21	18	33
17	21	35	32	23	362	40	25	20	19	20	19	22
18	21	25	30	24	376	38	24	21	18	20	18	20
19	21	24	29	46	139	186	23	23	18	19	18	19
20	20	24	29	30	92	84	23	20	19	18	19	22
21	35	35	27	28	72	63	34	19	18	18	18	20
22	24	57	26	27	68	52	26	19	18	18	18	19
23	31	36	27	25	58	46	24	59	19	18	18	20
24	43	31	26	25	61	43	24	27	18	17	18	21
25	25	29	25	28	53	40	23	29	18	18	17	23
26	23	29	24	42	49	38	23	24	18	17	21	20
27	21	122	25	36	48	37	22	44	18	17	41	19
28	23	147	24	31	42	35	29	41	18	18	40	20
29	23	147	24	31	---	34	28	28	18	18	21	19
30	25	76	24	28	---	33	23	25	18	18	19	25
31	25	---	57	28	---	32	---	23	---	20	18	---
TOTAL	789	1290	1089	899	2144	1436	844	759	637	660	644	738
MEAN	25.5	43.0	35.1	29.0	76.6	46.3	28.1	24.5	21.2	21.3	20.8	24.6
MAX	51	147	74	46	376	186	55	59	50	43	45	64
MIN	20	24	24	23	26	28	22	19	18	17	17	18
CAL YR 1985	TOTAL	14660		MEAN	40.2	MAX	476	MIN	19			
WTR YR 1986	TOTAL	11929		MEAN	32.7	MAX	376	MIN	17			

## TENNESSEE RIVER BASIN

03538270 BEAR CREEK AT STATE HIGHWAY 95 NEAR OAK RIDGE, TN

LOCATION.--Lat 35°56'17", long 84°20'29", Roane County, Hydrologic Unit 06010207, on right bank above bridge on State Highway 95, in triangle formed by intersection of Highway 95 and Bear Creek Valley Road, 6.8 mi southwest of Oak Ridge, and at mile 2.8.

DRAINAGE AREA.--4.26 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1959 to June 1964 (discharge measurements only), March 1985 to current year.

GAGE.--Water-stage recorder and Cippolletti-weir. Datum of gage is 790 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 233 ft<sup>3</sup>/s, Mar. 12, 1963; minimum discharge observed, 0.22 ft<sup>3</sup>/s, Aug. 5, 6, 10, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 145 ft<sup>3</sup>/s, Feb. 17, gage height, 2.36 ft; minimum discharge, 0.22 ft<sup>3</sup>/s, Aug. 5, 6, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	4.0	1.3	10	4.5	3.0	5.8	3.5	1.5	1.3	.42	.34	.58	
2	3.8	3.9	9.5	3.6	2.9	5.6	3.4	1.4	1.2	1.6	.31	4.9	
3	2.5	2.5	7.2	3.5	3.2	5.5	3.2	1.3	1.0	.96	.29	2.4	
4	1.9	3.6	5.9	3.2	3.1	5.0	3.0	1.2	1.0	.60	.29	1.1	
5	1.5	4.3	5.4	2.9	12	4.3	2.8	1.2	1.3	.51	.26	1.2	
6	1.3	3.1	4.6	2.5	11	4.1	2.7	1.2	2.6	.47	.23	1.3	
7	1.2	2.6	3.7	2.4	11	3.8	2.7	1.2	1.2	.43	.26	.66	
8	1.1	2.3	3.3	2.2	8.5	3.4	4.2	1.1	1.1	.43	.26	.54	
9	1.0	1.9	3.0	1.9	7.3	3.3	3.3	1.1	1.5	.42	.26	.46	
10	.96	1.7	2.7	2.0	6.6	3.2	2.9	1.0	1.8	.79	.24	.43	
11	.90	1.6	2.7	2.0	6.8	3.5	2.7	.98	1.2	1.5	.52	.44	
12	.87	1.5	3.8	1.9	5.6	5.8	2.5	.98	1.0	.59	.43	.60	
13	.84	1.4	6.6	1.9	5.1	13	2.4	1.0	.84	2.5	.33	.44	
14	.85	1.3	5.8	1.8	5.2	12	2.3	.98	.78	5.7	.28	.38	
15	1.3	1.3	5.2	1.7	5.6	11	2.2	.92	.73	3.1	.26	.37	
16	1.1	1.3	4.8	1.7	7.4	9.1	2.1	.84	.68	1.1	.26	.54	
17	.91	2.3	4.2	1.6	64	7.9	2.1	.83	.63	.82	.26	.48	
18	.84	1.6	3.6	1.6	75	6.9	2.0	.88	.59	.65	.26	.43	
19	.79	1.5	3.0	4.5	30	32	1.9	1.0	.59	.57	.26	.43	
20	.79	1.3	2.9	3.4	19	17	1.9	.89	.55	.50	.31	.43	
21	1.1	1.8	2.7	3.0	14	12	2.5	.83	.55	.46	.30	.43	
22	1.3	4.9	2.4	2.7	12	9.5	2.1	.79	.51	.42	.30	.38	
23	1.7	3.5	2.6	2.4	9.9	8.3	1.8	3.0	.51	.38	.30	.37	
24	3.3	2.9	2.5	2.3	9.9	7.2	1.7	1.9	.45	.38	.35	.34	
25	1.8	2.5	2.2	2.5	8.8	6.2	1.7	3.4	.43	.36	.28	.36	
26	1.4	2.3	1.9	4.2	8.3	5.7	1.7	1.9	.43	.33	.76	.34	
27	1.2	8.0	1.9	5.1	8.1	5.6	1.6	3.9	.43	.33	2.4	.33	
28	1.2	18	1.9	4.5	6.7	5.1	1.8	3.8	.42	.30	1.8	.30	
29	1.2	20	1.8	4.0	---	4.5	2.0	2.6	.38	.30	.72	.30	
30	1.2	12	1.7	3.6	---	4.1	1.6	1.9	.42	.30	.47	.31	
31	1.2	---	4.2	3.2	---	3.8	---	1.5	---	.32	.38	---	
TOTAL	45.05	118.2	123.7	88.3	370.0	234.2	72.3	47.02	26.12	27.54	13.97	21.57	
MEAN	1.45	3.94	3.99	2.85	13.2	7.55	2.41	1.52	.87	.89	.45	.72	
MAX	4.0	20	10	5.1	75	32	4.2	3.9	2.6	5.7	2.4	4.9	
MIN	.79	1.3	1.7	1.6	2.9	3.2	1.6	.79	.38	.30	.23	.30	
CFSM	.34	.92	.94	.67	3.10	1.77	.57	.36	.20	.21	.11	.17	
IN.	.39	1.03	1.08	.77	3.23	2.05	.63	.41	.23	.24	.12	.19	
WTR YR 1986	TOTAL	1187.97		MEAN	3.25	MAX	75	MIN	.23	CFSM	.76	IN.	10.37

## TENNESSEE RIVER BASIN

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03539800 OBED RIVER NEAR LANCING, TN

LOCATION.--Lat 36°04'53", long 84°40'15", Morgan County, Hydrologic Unit 06010208, on left bank at Alley Ford, 2.9 mi southwest of Lancing, 3.0 mi downstream from Clear Creek, and at mile 1.5.

DRAINAGE AREA.--518 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1956 to September 1968, March 1973 to current year. Prior to May 1957, monthly discharge only, published in WSP 1726.

GAGE.--Water-stage recorder. Datum of gage is 891.91 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 25 to Jan. 1, Jan. 10, 11, 27-31, July 31 to Aug. 14. Records good.

AVERAGE DISCHARGE.--25 years (water years 1957-68, 1974-86), 1,039 ft<sup>3</sup>/s, 27.24 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 105,000 ft<sup>3</sup>/s, May 27, 1973, gage height, 29.51 ft, dross line in gage well, 30.5 ft, from floodmarks, from rating curve extended above 33,000 ft<sup>3</sup>/s, on basis of slope conveyance study at gage height, 22.40 ft, and slope-area measurement of peak flow; minimum, 0.4 ft<sup>3</sup>/s, Oct. 31, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 23, 1929, reached a stage of 33.9 ft, 35 ft downstream from gage, from high water marks by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 13,000 ft<sup>3</sup>/s, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Nov. 28	2115	16,300	12.43	Feb. 18	0715	*17,900	*13.03

Minimum daily discharge, 4.5 ft<sup>3</sup>/s, Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	2740	235	2660	360	346	926	331	233	789	31	10	40	
2	4290	241	2490	473	343	828	309	213	1220	52	8.0	36	
3	2010	247	1920	449	416	777	290	189	610	121	7.0	69	
4	1620	293	1530	423	584	718	271	166	468	107	6.0	346	
5	1060	454	1270	390	930	657	250	148	564	83	5.5	372	
6	727	519	1170	371	2210	616	235	136	472	54	5.0	420	
7	543	449	998	336	2650	574	241	125	359	41	4.5	267	
8	423	405	872	326	2120	518	289	116	318	32	5.0	163	
9	342	370	779	324	1630	467	405	107	348	26	5.0	96	
10	287	332	712	270	1330	443	370	94	658	22	5.0	71	
11	254	307	640	260	1190	444	318	84	645	24	11	55	
12	227	291	684	269	984	452	288	79	517	23	9.0	46	
13	199	280	797	262	834	576	266	136	397	20	7.0	39	
14	174	259	904	243	806	1140	247	130	293	36	5.0	33	
15	210	244	803	236	869	1420	231	106	223	44	4.8	31	
16	249	239	757	222	831	1630	216	86	167	36	4.8	32	
17	210	345	709	213	4370	1340	200	72	122	30	5.4	31	
18	187	483	651	207	13600	1130	186	62	90	27	6.1	27	
19	160	438	587	251	5780	1230	175	55	71	27	7.3	24	
20	142	395	565	360	3090	1440	173	54	58	24	7.0	24	
21	136	375	555	347	2170	1180	197	51	49	22	6.4	23	
22	172	916	554	312	1680	986	306	52	42	19	6.0	28	
23	218	1290	499	301	1390	847	317	196	35	18	6.2	33	
24	218	1070	467	284	1220	750	277	782	30	16	6.4	31	
25	254	883	415	277	1200	655	249	533	25	16	5.2	27	
26	255	775	390	302	1070	578	236	603	22	15	6.3	24	
27	225	787	330	290	1050	539	224	858	20	16	7.4	21	
28	212	5760	300	260	1060	489	217	6240	19	16	8.9	20	
29	209	9140	275	200	---	437	249	3800	19	16	19	21	
30	221	4100	260	269	---	397	261	1910	18	14	62	19	
31	240	---	300	300	---	361	---	1180	---	12	50	---	
TOTAL	18414	31922	25843	9387	55753	24545	7824	18596	8668	1040	312.2	2469	
MEAN	594	1064	834	303	1991	792	261	600	289	33.5	10.1	82.3	
MAX	4290	9140	2660	473	13600	1630	405	6240	1220	121	62	420	
MIN	136	235	260	200	343	361	173	51	18	12	4.5	19	
CFSM	1.15	2.05	1.61	.58	3.84	1.53	.50	1.16	.56	.06	.02	.16	
IN.	1.32	2.29	1.86	.67	4.00	1.76	.56	1.34	.62	.07	.02	.18	
CAL YR 1985	TOTAL	254841.6		MEAN	698	MAX	9140	MIN	8.9	CFSM	1.35	IN.	18.30
WTR YR 1986	TOTAL	204773.2		MEAN	561	MAX	13600	MIN	4.5	CFSM	1.08	IN.	14.71

## TENNESSEE RIVER BASIN

03540500 EMORY RIVER AT OAKDALE, TN

LOCATION.--Lat 35°58'59", long 84°33'29", Morgan County, Hydrologic Unit 06010208, on left bank, at Oakdale, 1,000 ft downstream from highway bridge, 1,100 ft downstream from Mud Lick Creek, and at mile 18.3.

DRAINAGE AREA.--764 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1927 to current year. Prior to October 1929, published as Emory River at Harriman and October 1929 to September 1934 as Emory River at Oakdale.

REVISED RECORDS.--WSP 823: Drainage area. WSP 923: 1940. WSP 1386: 1928-30(M), 1932, 1943, 1945(P).

GAGE.--Water-stage recorder. Datum of gage is 761.38 ft above National Geodetic Vertical Datum of 1929. Prior to Oct 1, 1929, nonrecording gage at site 5.8 mi downstream at datum 43.60 ft lower, and Oct. 1, 1929, to Dec. 29, 1969, water-stage recorder at present site at datum 2.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--59 years, 1,454 ft<sup>3</sup>/s, 25.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 195,000 ft<sup>3</sup>/s, Mar. 23, 1929, gage height, 41.2 ft, present site and datum, 61.1 ft, site and datum then in use, from floodmarks and flood profile, from rating curve extended above 85,000 ft<sup>3</sup>/s, confirmed by slope-area measurement of May 28, 1973, flood at gage height 38.68 ft; no flow at times in 1944, 1952-53.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1857, that of Mar. 23, 1929, from report of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 19,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Nov. 28	2300	21,700	17.38	Feb. 18	0800	*25,800	*18.65

Minimum discharge, 5.2 ft<sup>3</sup>/s, Aug. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	1850	331	3450	506	486	1160	476	330	1030	26	12	78	
2	4990	347	3150	594	489	1060	443	301	1720	45	9.6	89	
3	2370	377	2420	582	556	1000	415	274	932	169	8.1	174	
4	1940	515	1910	557	732	934	380	246	855	174	7.1	325	
5	1330	858	1580	534	1200	855	351	224	1250	140	6.3	399	
6	945	919	1450	496	3070	803	328	209	930	101	5.7	477	
7	722	779	1240	463	3660	753	325	197	653	78	5.4	330	
8	580	682	1100	429	2950	682	384	183	530	63	5.7	214	
9	478	607	987	343	2210	626	575	170	578	52	5.5	146	
10	396	545	884	362	1760	593	574	156	1530	46	5.6	108	
11	345	489	808	380	1550	588	500	139	1140	51	14	87	
12	304	449	823	361	1290	593	452	129	929	48	12	76	
13	268	427	966	353	1100	744	415	142	691	44	24	66	
14	239	397	1140	325	1030	1380	380	180	494	44	25	57	
15	223	368	1080	313	1110	1660	354	162	361	85	17	50	
16	309	354	1020	299	1060	1990	327	137	272	99	12	48	
17	269	527	954	288	5370	1690	301	115	211	87	12	49	
18	247	723	876	284	19900	1440	285	100	164	78	12	47	
19	222	685	771	354	8140	1890	265	93	130	61	10	44	
20	202	619	699	532	4320	2100	256	90	104	53	9.7	48	
21	286	576	675	556	2950	1660	275	86	89	47	9.2	46	
22	368	1340	597	511	2220	1380	374	84	77	40	9.2	45	
23	359	1990	601	484	1800	1200	420	195	67	33	9.0	50	
24	400	1590	614	455	1550	1070	375	1470	60	27	8.1	59	
25	413	1290	580	438	1490	935	341	1600	52	23	7.4	56	
26	412	1120	481	469	1340	826	323	1150	45	21	7.3	53	
27	379	1140	467	515	1290	757	308	1190	38	18	19	48	
28	350	5860	460	444	1290	692	297	6100	33	17	62	42	
29	329	13200	429	489	---	621	345	4680	29	19	53	39	
30	320	5500	379	504	---	564	366	2400	26	17	49	43	
31	336	---	420	490	---	516	---	1500	---	13	84	---	
TOTAL	22181	44604	33011	13710	75913	32762	11210	24032	15020	1819	535.9	3393	
MEAN	716	1487	1065	442	2711	1057	374	775	501	58.7	17.3	113	
MAX	4990	13200	3450	594	19900	2100	575	6100	1720	174	84	477	
MIN	202	331	379	284	486	516	256	84	26	13	5.4	39	
CFSM	.94	1.95	1.39	.58	3.55	1.38	.49	1.01	.66	.08	.02	.15	
IN.	1.08	2.17	1.61	.67	3.70	1.60	.55	1.17	.73	.09	.03	.17	
CAL YR 1985	TOTAL	352864		MEAN	967	MAX	13200	MIN	34	CFSM	1.27	IN.	17.18
WTR YR 1986	TOTAL	278190.9		MEAN	762	MAX	19900	MIN	5.4	CFSM	1.00	IN.	13.55



## TENNESSEE RIVER BASIN

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03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN  
(National stream-quality accounting network station)

LOCATION.--Lat 35°37'13", long 84°47'00", Rhea County, Hydrologic Unit 06020001, on right bank in powerhouse at Watts Bar Dam, 6.5 mi southeast of Spring City, and at mile 529.9.

DRAINAGE AREA.--17,310 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1934 to February 1940 (published as "at Breedenton"), October 1974 to September 1986 (discontinued). Equivalent record for period January 1942 to December 1974 published in annual reports of Tennessee Valley Authority entitled "Operation of TVA Reservoirs".

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to March 1940 at site 6.7 mi downstream at datum 666.22 ft higher.

REMARKS.--Flow regulated since 1936 by many reservoirs above station (see p. and Water Resources Data for North Carolina).

COOPERATION.--Records furnished by Tennessee Valley Authority.

AVERAGE DISCHARGE.--17 years (water years 1935-39, 1975-86), 27,480 ft<sup>3</sup>/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 208,000 ft<sup>3</sup>/s, May 8, 1984; minimum daily, 3,070 ft<sup>3</sup>/s, May 26, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 35,400 ft<sup>3</sup>/s, Dec. 4; minimum daily, 2,660 ft<sup>3</sup>/s, June 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24400	9580	29800	12200	6030	16700	5130	5180	6930	13700	15900	14000
2	30500	7880	31000	12100	5650	10500	5930	5300	6990	12100	4840	14800
3	21900	7230	33600	20000	9770	10200	6040	4410	7020	10300	5320	17200
4	18100	13300	35400	11400	8090	28000	5690	4480	5940	5500	11200	20200
5	12400	19100	35300	8960	9800	28000	5100	5830	6230	5270	11700	24000
6	9580	20800	32900	20100	15900	29900	3250	5220	6070	5370	11700	7910
7	18200	23600	23700	19200	18600	28800	6380	4280	5630	14900	12900	5040
8	25300	23800	16400	20200	13900	11600	6160	6430	5700	18800	6960	13900
9	21200	22600	21600	17700	13400	6790	7470	8190	5800	19000	5140	15700
10	21200	17300	19600	14500	13900	16900	7430	6990	5510	14500	5100	19900
11	14300	22100	29500	10600	29500	17300	8850	6940	5230	20500	11100	21100
12	11800	22100	30700	5120	33600	17100	5240	6770	4610	6050	10100	19300
13	8270	18400	35300	13900	32400	23100	5210	6160	6980	8250	12900	5040
14	17000	17300	28700	17300	20500	18300	4960	6650	7360	17900	12300	5180
15	13800	16200	19400	14800	13400	10500	5080	6510	7030	11400	13800	13300
16	13700	10400	33800	13300	10700	7210	5250	6680	14000	18100	11200	19100
17	20900	8640	30900	12900	14900	12600	5330	6720	13400	20100	5150	17400
18	20700	13200	28400	7330	29900	14800	5550	6590	14200	21500	11600	19100
19	15800	19000	29000	5570	35200	15800	5470	6710	7490	5160	11800	14400
20	10500	18100	28700	13300	35100	29500	5350	6980	11300	5400	17000	3560
21	11900	19100	17600	13500	34700	30100	5410	6450	2660	15100	11400	3140
22	15400	20400	15700	12400	16800	33900	5400	7030	3310	17800	10100	9870
23	17300	16400	10500	10100	14400	26000	5930	6560	10500	19200	4960	16000
24	21600	13000	14800	11100	19900	12900	4670	5710	21100	23900	5120	20700
25	18100	18200	26200	6830	21100	9550	4970	6650	16100	17400	16900	25700
26	8370	18800	28500	4820	19400	8400	4720	8180	16600	6990	15900	24600
27	7120	15300	20200	27600	18500	8280	5080	8020	6880	6910	15800	5220
28	12500	9520	11300	35100	18200	9460	4850	6500	8300	13800	17300	5290
29	13000	23400	9300	27000	---	5520	4600	7730	8220	11600	19400	11800
30	9800	27600	9750	16000	---	5230	5190	9430	12800	12000	6970	13100
31	9620	---	14100	13700	---	5760	---	8700	---	14700	7290	---
TOTAL	494260	512350	751650	448630	533240	508700	165690	203980	259890	413200	338850	425550
MEAN	15940	17080	24250	14470	19040	16410	5523	6580	8663	13330	10930	14190
MAX	30500	27600	35400	35100	35200	33900	8850	9430	21100	23900	19400	25700
MIN	7120	7230	9300	4820	5650	5230	3250	4280	2660	5160	4840	3140
CAL YR 1985	TOTAL	6291740		MEAN	17240	MAX	54900	MIN	3070			
WTR YR 1986	TOTAL	5055990		MEAN	13850	MAX	35400	MIN	2660			

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to July 1986 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1976 to September 1981.

WATER TEMPERATURE: February 1976 to September 1981.

REMARKS.--Flow regulated by many reservoirs (see p. 169 and Water Resources Data for North Carolina).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 270 microsiemens, July 27, 1978 and July 6, 1981; minimum, 88 microsiemens, June 14, 1979.

WATER TEMPERATURE: Maximum, 31.5°C, Aug. 22, 1980; minimum, 2.0°C, Jan. 23, 29, 1977, Feb. 7-10, 1978.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 24...	1030	23300	190	7.50	21.0	750	2.5	5.5	63	K3
JAN 22...	1300	13800	205	8.20	6.0	750	1.3	12.4	101	K9
APR 16...	1230	7300	180	8.40	14.5	744	1.6	9.8	99	K6
JUL 23...	1240	33400	205	7.60	26.0	747	2.5	3.8	48	110

DATE	STREP- TOCOCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3
OCT 24...	89	78	7	22	5.6	9.3	20	0.5	1.6	71
JAN 22...	K1	86	16	24	6.4	9.9	20	0.5	2.0	70
APR 16...	K1	73	8	21	5.1	7.9	19	0.4	1.5	65
JUL 23...	100	84	11	24	5.9	9.0	18	0.4	1.7	73

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
OCT 24...	4.4	18	10	<0.1	4.2	113	110	0.15	7110	<0.01
JAN 22...	0.9	16	11	0.1	4.7	118	120	0.16	4400	0.01
APR 16...	0.5	14	9.4	<0.1	2.7	108	99	0.15	2130	0.02
JUL 23...	3.6	18	9.1	0.1	3.2	116	120	0.16	10500	0.01

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 24...	0.24	<0.01	<0.01	0.3	0.03	0.02	0.02	6	377	86
JAN 22...	0.62	0.10	0.09	0.6	0.05	0.03	0.02	7	261	49
APR 16...	0.25	0.04	0.05	0.5	0.03	<0.01	<0.01	3	59	83
JUL 23...	0.23	0.06	0.06	0.5	0.03	0.01	<0.01	6	541	78

K--Results based on non-ideal colony count.

TENNESSEE RIVER BASIN

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03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 24...	<10	1	29	<0.5	1	<1	<3	1	8	<5
JAN 22...	<10	<1	28	<0.5	<1	<1	<3	2	8	<5
JUL 23...	<10	1	31	<0.5	<1	1	<3	3	<3	<5

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 24...	<4	67	<0.1	<10	<1	<1	<1	77	<6	7
JAN 22...	<4	3	<0.1	<10	1	<1	<1	91	<6	7
JUL 23...	<4	41	<0.1	<10	1	<1	<1	82	<6	12

## TENNESSEE RIVER BASIN

03543500 SEWEE CREEK NEAR DECATUR, TN

LOCATION.--Lat 35°34'53", long 84°44'53", Meigs County, Hydrologic Unit 06020001, on right bank, 0.3 mi downstream from bridge on State Highway 58, 0.5 mi downstream from Dry Fork, 5.0 mi north of Decatur, and at mile 5.7.

DRAINAGE AREA.--117 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1934 to current year. Prior to October 1935, published as Suee Creek near Decatur.

REVISED RECORDS.--WSP 1910: 1936(M), 1939(M), 1943(M), 1946, 1948(M), 1949, 1951, 1957, 1958(P). WSP 2110: 1951 (monthly runoff).

GAGE.--Water-stage recorder. Datum of gage is 694.32 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--52 years, 190 ft<sup>3</sup>/s, 22.05 in/yr.

EXTREMES FOR PERIOD RECORD.--Maximum discharge, 23,900 ft<sup>3</sup>/s, Jan. 7, 1946, gage height, 23.97 ft, from floodmarks, from rating curve extended above 11,300 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 22.81 ft; minimum, 8.0 ft<sup>3</sup>/s, Jan. 12, 1981, result of freezeup; minimum gage height, 0.12 ft, July 31, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Feb. 18	0700	*2,790	*7.34	No other peak greater than base discharge.			

Minimum discharge, 9.7 ft<sup>3</sup>/s, July 31, gage height, 0.12 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	33	153	70	55	103	76	38	30	18	12	21
2	51	42	147	55	54	95	73	35	28	21	13	30
3	39	36	110	51	58	91	70	35	27	23	13	45
4	33	37	94	48	56	84	67	33	28	21	13	45
5	29	42	86	44	107	80	64	33	27	18	12	55
6	25	40	81	41	114	72	62	33	24	17	12	38
7	23	38	69	40	99	67	86	33	24	15	12	28
8	22	34	64	37	86	63	82	33	25	15	17	24
9	22	32	59	35	78	60	76	32	68	14	16	22
10	22	31	54	35	76	60	66	31	92	16	18	22
11	22	29	53	35	135	62	62	31	44	18	70	21
12	22	28	77	34	111	61	59	31	34	17	27	30
13	22	27	98	33	97	105	57	31	28	15	19	25
14	23	27	94	33	104	120	55	31	26	16	17	21
15	26	26	80	33	170	227	54	28	24	17	16	19
16	27	28	73	32	186	144	47	28	22	18	21	24
17	26	42	68	31	946	118	46	27	22	16	35	23
18	24	35	64	32	2210	105	46	28	21	14	21	21
19	24	30	57	57	726	1120	45	32	21	13	17	20
20	24	28	54	59	432	451	45	30	20	12	27	21
21	29	28	52	48	310	266	54	26	19	13	30	28
22	43	34	48	45	235	195	51	26	19	13	21	26
23	43	34	48	42	201	161	45	26	18	28	17	24
24	66	31	47	40	177	138	43	27	17	14	16	34
25	43	29	44	42	157	121	41	35	16	14	15	25
26	35	28	39	64	139	112	40	32	15	13	15	21
27	31	216	38	84	130	105	40	38	15	14	27	18
28	31	363	38	67	115	95	40	69	16	13	23	17
29	30	583	36	66	---	88	44	56	19	13	24	16
30	28	206	34	64	---	85	39	39	18	12	20	15
31	27	---	48	58	---	80	---	33	---	11	17	---
TOTAL	945	2217	2107	1455	7364	4734	1675	1040	807	492	633	779
MEAN	30.5	73.9	68.0	46.9	263	153	55.8	33.5	26.9	15.9	20.4	26.0
MAX	66	583	153	84	2210	1120	86	69	92	28	70	55
MIN	22	26	34	31	54	60	39	26	15	11	12	15
CFSM	.26	.63	.58	.40	2.25	1.31	.48	.29	.23	.14	.17	.22
IN.	.30	.70	.67	.46	2.34	1.51	.53	.33	.26	.16	.20	.25
CAL YR 1985	TOTAL	30747	MEAN	84.2	MAX	1890	MIN	16	CFSM	.72	IN.	9.78
WTR YR 1986	TOTAL	24248	MEAN	66.4	MAX	2210	MIN	11	CFSM	.57	IN.	7.71



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LOCATION.--Lat 34°59'43", long 84°22'56", Polk County, Hydrologic Unit 06020203, on right bank 100 ft upstream from bridge on State Highway 68, 0.1 mi upstream from mouth, 0.4 mi northwest of Louisville and Nashville Railroad station, and 0.8 mi northwest of Post Office at Copperhill.

PERIOD OF RECORD.--July 1940 to September 1941 (published as Mill Creek at Copperhill), December 1948 to December 1977, July 1986 to September 1986.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,451.06 ft above National Geodetic Vertical Datum of 1929. July 16, 1940, to Sept. 30, 1941, water-stage recorder and sharp-crested weir at site 145 ft upstream at datum of 1.58 ft higher. Oct. 1, 1941, to Aug. 12, 1971, water-stage recorder and concrete San Dimas flume and dam at present site and datum.

AVERAGE DISCHARGE.--28 years (water years 1941, 1950-77), 55.2 ft<sup>3</sup>/s, unadjusted.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period July to September 1986, 249 ft<sup>3</sup>/s, Aug. 8, gage height, 1.28 ft; minimum daily, 85 ft<sup>3</sup>/s, Aug. 20.

[illegible]

## TENNESSEE RIVER BASIN

03563000 OCOEE RIVER AT EMF, TN

LOCATION.--Lat 35°05'48", long 84°32'07", Polk County, Hydrologic Unit 06020203, on left bank 700 ft downstream from Tennessee Valley Authority powerplant, 0.8 mi upstream from former village of Emf, 2.0 mi downstream from Goforth Creek, and at mile 19.6.

DRAINAGE AREA.--524 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1912 to current year. Prior to January 1913, monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 783: 1913-34. WSP 853: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 837.88 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Blue Ridge Lake (station 03558500) in Water Resources Data for Georgia, Ocoee No. 3 Lake (station 03562500), and by powerplant above station. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--74 years, 1,235 ft<sup>3</sup>/s, 32.01 in/yr unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft<sup>3</sup>/s, July 10, 1916, gage height, 13.7 ft, from rating curve extended above 17,000 ft<sup>3</sup>/s; minimum, 3.4 ft<sup>3</sup>/s, Sept. 20, 1962, gage height, 2.12 ft; minimum daily, 4.6 ft<sup>3</sup>/s, Sept. 14, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 19, 1906, discharge, 62,000 ft<sup>3</sup>/s, was the greatest known since at least 1840, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,970 ft<sup>3</sup>/s, Feb. 18, gage height, 6.37 ft; minimum, 5.6 ft<sup>3</sup>/s, Oct. 6, 7, gage height, 2.13 ft; minimum daily, 8.1 ft<sup>3</sup>/s, Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	743	850	1460	1100	570	563	454	266	560	637	464	469
2	726	495	1060	1080	572	409	441	270	505	613	561	679
3	429	503	977	1110	577	480	439	491	396	373	562	1030
4	385	656	470	1080	582	738	430	478	364	473	467	370
5	14	897	296	1080	575	726	533	221	393	576	266	546
6	8.1	886	84	1070	574	730	516	187	358	558	278	689
7	396	884	533	1070	691	730	487	193	469	561	470	571
8	382	884	502	1060	572	412	611	319	489	627	487	347
9	384	879	97	1070	565	399	485	362	358	617	572	332
10	401	877	362	1070	567	400	471	460	360	602	575	344
11	460	877	379	882	790	417	461	453	350	279	482	355
12	466	967	633	793	1070	417	546	364	393	541	268	355
13	477	1050	1110	816	1060	1160	538	317	572	581	264	584
14	558	1050	1080	1060	640	1660	333	276	462	382	471	590
15	673	1040	1030	1050	569	1010	371	272	567	162	466	351
16	674	823	1040	637	568	812	404	411	616	572	534	520
17	675	1050	979	551	667	688	407	486	577	628	585	567
18	828	1050	1070	401	2040	517	407	457	603	610	619	505
19	531	1040	1060	406	1240	947	507	451	678	579	511	512
20	486	1040	1060	689	885	892	515	370	604	558	508	572
21	548	1040	1070	689	600	631	324	367	578	501	368	550
22	673	1040	1070	695	602	552	328	487	584	530	377	344
23	543	1030	1070	682	604	550	422	398	603	533	558	49
24	956	1030	1070	650	614	545	320	459	621	522	554	428
25	648	699	1070	571	418	453	316	467	268	519	350	353
26	497	331	1060	387	503	495	516	451	356	609	348	353
27	493	406	1070	1200	485	449	501	378	577	565	336	459
28	679	403	1070	1280	502	449	286	730	578	477	401	448
29	562	624	1070	1080	---	526	280	482	587	428	356	506
30	610	806	1060	1070	---	531	274	377	627	437	582	396
31	830	---	1100	643	---	453	---	507	---	452	580	---
TOTAL	16735.1	25207	27062	27022	19702	19741	12923	12207	15053	16102	14220	14174
MEAN	540	840	873	872	704	637	431	394	502	519	459	472
MAX	956	1050	1460	1280	2040	1660	611	730	678	637	619	1030
MIN	8.1	331	84	387	418	399	274	187	268	162	264	49
(+)	+600	-6000	-2100	-7800	+4700	+10000	+8200	+4500	-3800	-7600	-5100	-2700
MEAN†	559	640	805	620	872	959	704	539	375	274	294	382
CFSM†	1.07	1.22	1.54	1.18	1.66	1.83	1.34	1.03	0.72	0.52	0.56	0.73
IN.†	1.23	1.36	1.77	1.36	1.73	2.11	1.50	1.19	.80	0.60	0.65	0.81

CAL YR 1985	TOTAL	276287.1	MEAN	757	MAX	3970	MIN	8.1	MEAN†	785	CFSM†	1.50	IN†	20.34
WTR YR 1986	TOTAL	220148.1	MEAN	603	MAX	2040	MIN	8.1	MEAN†	584	CFSM†	1.11	IN†	15.12

† Change in contents, in cfs-days, in Blue Ridge Lake (Georgia) furnished by Tennessee Valley Authority.

‡ Adjusted for change in contents in Blue Ridge Lake (Georgia).

NOTE.--Contents (cfs-days) for adjustments furnished by Tennessee Valley Authority.

## TENNESSEE RIVER BASIN

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## 03564500 OCOEE RIVER AT PARKSVILLE, TN

LOCATION.--Lat 35°05'48", long 84°39'15", Polk County, Hydrologic Unit 06020203, on right bank 0.4 mi downstream from Lake Ocoee Dam and Ocoee No. 1 powerplant of Tennessee Valley Authority at Parksville, and at mile 11.5.

DRAINAGE AREA.--595 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1911 to September 1916, March 1921 to current year.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1916, 1921-36 (adjusted runoff). WSP 1386: 1926.

GAGE.--Water-stage recorder. Datum of gage is 716.96 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Mar. 9, 10. Records good. Flow regulated by Blue Ridge Lake (station 03558500) in Water Resources Data for Georgia, Ocoee No. 3 Lake (station 03562500), and Lake Ocoee (station 03564000). Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--70 years, 1,320 ft<sup>3</sup>/s, 30.13 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,700 ft<sup>3</sup>/s, Mar. 29, 1951, gage height, 20.22 ft; minimum daily, 10 ft<sup>3</sup>/s, Oct. 28, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 19, 1906, discharge, 65,000 ft<sup>3</sup>/s, was the greatest known flood since at least 1840, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,800 ft<sup>3</sup>/s, Feb 18, gage height, 6.16 ft; minimum, 78 ft<sup>3</sup>/s, Sept. 11, 18, gage height, 2.75 ft; minimum daily, 108 ft<sup>3</sup>/s, Dec. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	410	768	712	1240	867	557	437	322	675	1040	398	564		
2	1060	816	1400	1410	415	516	459	267	726	1160	454	355		
3	488	841	1030	1590	377	507	275	354	374	949	433	888		
4	433	890	1150	1190	546	718	276	320	365	634	378	1120		
5	191	1170	1380	1170	533	618	271	318	478	635	394	989		
6	222	1290	1190	1190	491	614	275	313	409	636	370	722		
7	573	1320	108	1240	565	811	271	331	418	629	338	666		
8	385	1290	108	1260	670	386	274	313	394	663	480	442		
9	357	1230	305	1190	602	360	273	322	417	654	520	387		
10	378	1240	730	1220	623	460	283	317	413	604	487	349		
11	402	1250	695	785	740	437	274	314	442	537	332	378		
12	445	1260	1140	682	990	402	268	354	492	578	488	375		
13	445	1320	1100	824	968	357	297	373	488	493	483	458		
14	486	1300	1310	1170	938	1030	273	356	496	577	419	468		
15	525	1210	1200	1150	558	1310	269	366	498	368	390	439		
16	648	921	1200	617	515	1480	277	354	501	379	400	462		
17	767	930	1260	514	525	896	311	360	759	472	443	526		
18	875	1280	1240	647	1740	1120	339	344	654	390	428	492		
19	594	1260	1250	582	1670	1060	315	421	611	367	825	547		
20	552	1240	1290	767	1480	1160	310	411	653	376	504	540		
21	632	1210	1130	570	1590	873	315	420	539	530	466	533		
22	634	1080	1050	559	684	639	327	409	537	571	512	549		
23	528	1060	1120	679	744	608	359	406	668	521	519	394		
24	1030	1030	1150	727	767	623	329	406	636	495	531	417		
25	587	514	932	542	488	480	317	405	591	536	499	261		
26	615	634	1050	459	567	534	317	403	482	595	412	408		
27	583	650	1110	994	485	569	331	402	471	620	457	377		
28	858	654	1100	1170	423	574	319	514	480	763	526	367		
29	814	693	1180	754	---	494	325	662	491	552	491	418		
30	873	747	1180	1430	---	300	309	563	434	483	517	423		
31	835	---	1100	850	---	518	---	599	---	420	507	---		
TOTAL	18225	31098	31900	29172	21561	21011	9275	12019	15592	18227	14401	15314		
MEAN	588	1037	1029	941	770	678	309	388	520	588	465	510		
MAX	1060	1320	1400	1590	1740	1480	459	662	759	1160	825	1120		
MIN	191	514	108	459	377	300	268	267	365	367	332	261		
CAL YR 1985	TOTAL	295841	MEAN	811	MAX	2720	MIN	75	MEAN†	843	CFSM†	1.42	IN†	19.22
WTR YR 1986	TOTAL	237795	MEAN	651	MAX	1740	MIN	108	MEAN†	628	CFSM†	1.06	IN†	14.33

† Adjusted for change in contents in Blue Ridge Lake (Georgia) and Lake Ocoee.

NOTE.--Contents (cfs-days) for adjustments furnished by Tennessee Valley Authority.

## TENNESSEE RIVER BASIN

03565300 SOUTH CHESTUEE CREEK NEAR BENTON, TN

LOCATION.--Lat 35°10'02", long 84°42'59", Bradley County, Hydrologic Unit 06020002, on right bank 50 ft downstream from county highway bridge, 0.2 mi downstream from Climer Branch, 2.4 mi southwest of Benton Station, 2.8 mi north of Ocoee, 3.6 mi west of Benton, and at mile 9.3.

DRAINAGE AREA.--31.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 712.14 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair to Jan. 16 and good from Jan. 17 to Sept. 30. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--29 years, 50.2 ft<sup>3</sup>/s, 21.44 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft<sup>3</sup>/s, Mar. 16, 1973, gage height, 12.11 ft, from rating curve extended above 3,200 ft<sup>3</sup>/s on basis of contracted-opening and flow-over-road measurement of peak flow; minimum, 1.5 ft<sup>3</sup>/s, July 20, 21, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Mar. 19	1230	*554	*6.54				

Minimum daily discharge, 1.5 ft<sup>3</sup>/s, July 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	12	6.6	24	18	8.5	14	12	5.9	6.9	2.7	1.7	4.8	
2	16	7.1	23	12	10	14	12	5.6	6.4	2.6	3.3	19	
3	6.9	5.7	20	11	8.7	13	12	5.4	5.7	2.5	5.2	14	
4	5.7	5.7	18	9.6	8.5	13	11	5.2	5.6	2.7	2.0	25	
5	4.8	6.2	16	8.8	8.2	12	10	5.1	5.6	2.3	1.8	23	
6	4.2	5.4	14	7.6	8.1	12	10	5.0	5.1	2.0	1.8	8.9	
7	3.9	5.0	12	7.6	7.9	11	11	4.9	4.8	1.8	1.9	6.7	
8	3.7	4.8	10	6.6	7.2	11	27	5.1	4.9	1.9	4.8	5.7	
9	3.3	4.2	8.0	6.4	6.8	9.9	24	4.8	5.6	1.9	2.5	5.1	
10	3.7	3.9	7.4	6.9	6.9	10	15	4.7	4.7	1.9	2.3	4.8	
11	3.4	4.1	7.6	6.6	13	13	13	4.7	4.5	1.8	2.5	4.5	
12	3.7	4.1	21	6.4	11	13	12	4.6	4.2	2.0	2.3	7.4	
13	3.7	4.2	69	6.1	9.1	54	11	4.8	4.0	2.0	2.2	5.4	
14	3.3	4.4	28	5.9	12	47	10	4.7	3.8	2.1	2.2	4.4	
15	3.5	4.5	18	5.7	33	51	9.5	4.5	3.7	2.8	2.2	3.9	
16	3.5	5.0	15	6.0	20	31	8.7	4.5	3.5	2.1	2.2	4.0	
17	3.8	7.6	13	6.2	175	24	8.5	4.5	3.5	2.0	2.7	4.0	
18	3.2	10	12	6.4	293	20	8.4	4.5	3.4	1.8	2.9	3.6	
19	3.9	8.4	10	9.0	78	259	8.2	5.6	3.2	1.7	2.6	3.4	
20	4.4	7.8	10	8.1	47	72	8.0	14	3.2	1.7	2.6	3.4	
21	6.1	7.1	9.6	6.9	35	39	11	6.4	3.1	1.7	2.9	3.6	
22	6.6	8.4	9.0	6.4	28	30	8.9	5.3	2.9	1.7	8.6	3.4	
23	8.2	9.4	9.0	5.9	24	25	8.1	5.1	2.9	1.7	3.4	3.3	
24	9.2	7.5	8.8	5.6	22	22	7.2	4.9	2.9	5.8	3.0	3.0	
25	5.7	5.6	8.5	6.7	20	19	7.0	9.2	2.8	2.4	3.0	3.0	
26	4.5	6.2	8.0	24	18	17	6.9	7.0	2.7	2.0	3.0	2.9	
27	4.4	6.4	7.5	20	18	17	6.5	24	2.6	1.9	8.2	3.1	
28	4.4	30	7.5	14	16	15	6.3	27	2.7	2.2	5.0	2.8	
29	4.4	39	7.5	11	---	14	7.0	16	2.6	2.0	4.5	2.5	
30	4.4	40	7.1	10	---	14	6.2	10	2.8	1.8	5.5	2.2	
31	5.2	---	10	9.3	---	13	---	8.0	---	1.7	4.5	---	
TOTAL	163.7	274.3	448.5	280.7	952.9	928.9	316.4	231.0	120.3	67.2	103.3	190.8	
MEAN	5.28	9.14	14.5	9.05	34.0	30.0	10.5	7.45	4.01	2.17	3.33	6.36	
MAX	16	40	69	24	293	259	27	27	6.9	5.8	8.6	25	
MIN	3.2	3.9	7.1	5.6	6.8	9.9	6.2	4.5	2.6	1.7	1.7	2.2	
CFSM	.17	.29	.46	.28	1.07	.94	.33	.23	.13	.07	.10	.20	
IN.	.19	.32	.52	.33	1.11	1.09	.37	.27	.14	.08	.12	.22	
CAL YR 1985	TOTAL	7671.0		MEAN	21.0	MAX	985	MIN	2.6	CFSM	.66	IN.	8.97
WTR YR 1986	TOTAL	4078.0		MEAN	11.2	MAX	293	MIN	1.7	CFSM	.35	IN.	4.77



TENNESSEE RIVER BASIN

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03565500 OOSTANAULA CREEK NEAR SANFORD, TN

LOCATION.--Lat 35°19'39", long 84°42'19", McMinn County, Hydrologic Unit 06020002, on right bank 20 ft downstream from highway bridge, 1.3 mi southeast of Sanford, 3.5 mi northeast of Calhoun, and at mile 5.7.

DRAINAGE AREA.--57.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 716.51 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--32 years, 92.1 ft<sup>3</sup>/s, 21.94 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft<sup>3</sup>/s, Mar. 16, 1973, gage height, 13.43 ft, from rating curve extended above 4,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 10 ft<sup>3</sup>/s, Sept. 30, Nov. 7, 1985, result of bridge construction upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 18	1515	*431	*4.41				

Minimum discharge, 10 ft<sup>3</sup>/s, Nov. 7, result of bridge construction upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	17	35	27	22	48	34	27	23	19	13	20
2	39	17	35	33	22	47	33	25	24	21	13	23
3	41	19	35	29	22	46	32	25	24	30	12	40
4	31	18	28	26	19	44	32	25	22	27	13	45
5	30	22	27	25	17	42	32	25	23	20	13	62
6	26	21	26	26	18	41	32	25	22	19	12	43
7	24	17	25	25	18	39	35	25	21	19	11	31
8	24	12	24	22	17	38	43	24	22	18	13	28
9	22	13	26	22	17	38	40	23	24	17	13	26
10	21	14	25	22	18	38	38	23	36	16	12	23
11	20	18	23	22	21	37	35	23	38	16	21	21
12	20	19	24	22	25	37	34	23	28	15	30	34
13	21	17	41	23	22	36	33	24	24	16	17	50
14	23	17	41	22	21	42	34	23	23	17	16	33
15	22	18	35	20	30	43	33	22	22	18	15	30
16	22	20	32	19	34	52	30	22	22	17	15	28
17	22	20	30	19	63	45	30	22	22	16	15	44
18	21	17	28	19	355	41	30	22	19	15	15	34
19	20	17	27	21	204	42	29	23	18	14	14	27
20	20	16	26	26	101	52	29	25	18	14	14	24
21	22	16	26	23	82	45	32	25	18	15	15	23
22	22	17	25	20	72	42	34	22	17	14	26	23
23	20	19	27	20	68	41	30	21	18	14	30	23
24	19	20	27	19	63	40	29	21	18	13	18	20
25	22	21	25	20	59	39	28	24	17	17	18	19
26	29	21	24	23	54	37	28	27	16	15	18	19
27	25	19	25	33	52	36	27	27	16	13	20	18
28	25	22	24	28	51	35	28	28	19	14	25	18
29	22	37	23	25	---	34	29	31	20	14	21	18
30	19	40	25	23	---	35	29	29	18	12	19	18
31	19	---	25	22	---	35	---	25	---	11	18	---
TOTAL	740	581	869	726	1567	1267	962	756	652	516	525	865
MEAN	23.9	19.4	28.0	23.4	56.0	40.9	32.1	24.4	21.7	16.6	16.9	28.8
MAX	41	40	41	33	355	52	43	31	38	30	30	62
MIN	19	12	23	19	17	34	27	21	16	11	11	18
CFSM	.42	.34	.49	.41	.98	.72	.56	.43	.38	.29	.30	.51
IN.	.48	.38	.57	.47	1.02	.83	.63	.49	.43	.34	.34	.56
CAL YR 1985	TOTAL	16223	MEAN	44.4	MAX	812	MIN	12	CFSM	.78	IN.	10.59
WTR YR 1986	TOTAL	10026	MEAN	27.5	MAX	355	MIN	11	CFSM	.48	IN.	6.54

## TENNESSEE RIVER BASIN

03566420 WOLFTEVER CREEK NEAR OOLTEWAH, TN

LOCATION.--Lat 35°03'43", long 85°03'59", Hamilton County, Hydrologic Unit 06020001, on right downstream wingwall of county road bridge, 0.6 mi downstream from Southern Railway bridge, 0.9 mi south of Ooltewah, 1.6 mi upstream from Little Wolftever Creek, and at mile 16.1.

DRAINAGE AREA.--18.8 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 755.08 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--22 years, 32.2 ft<sup>3</sup>/s, 23.26 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft<sup>3</sup>/s, Mar. 16, 1973, gage height, 9.75 ft; minimum, 0.94 ft<sup>3</sup>/s, July 28, 30, 31, Aug. 5, 6, 7, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 17	1930	*558	*4.12				

Minimum discharge, 0.94 ft<sup>3</sup>/s, July 28, 30, 31, Aug. 5, 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	39	9.2	48	18	9.7	13	9.1	4.7	4.3	3.7	1.7	2.5	
2	24	8.6	41	12	9.3	12	8.6	5.0	3.8	2.7	1.8	14	
3	12	8.3	22	11	9.2	12	8.6	4.5	3.3	2.1	1.3	3.8	
4	9.2	15	17	11	8.6	11	8.5	4.3	3.4	1.8	1.1	46	
5	8.2	12	15	9.8	11	11	8.2	4.1	3.2	1.7	1.1	13	
6	7.4	10	13	8.7	12	11	7.8	4.0	3.0	1.6	1.1	4.1	
7	6.7	9.6	11	8.6	11	9.4	7.8	3.9	2.9	1.6	1.2	2.7	
8	6.8	8.8	11	8.2	9.2	8.9	11	3.9	3.0	1.6	2.2	2.3	
9	7.1	8.6	10	7.7	8.6	8.6	9.3	3.9	5.0	1.7	3.4	1.8	
10	7.4	8.6	9.2	8.6	10	8.6	7.8	3.8	3.9	1.5	2.0	1.8	
11	7.3	8.6	16	8.1	25	13	7.3	3.7	9.1	1.5	1.6	1.7	
12	7.5	8.6	41	7.7	15	10	6.8	3.8	4.1	1.5	1.4	7.2	
13	7.9	7.9	85	7.4	13	29	6.7	3.9	3.0	1.5	1.3	2.3	
14	8.5	8.4	36	7.2	40	38	6.7	3.8	2.8	1.8	1.2	1.9	
15	8.8	8.3	23	6.9	60	36	6.6	3.8	2.6	2.0	1.2	1.7	
16	9.8	9.3	19	6.7	34	23	6.2	3.9	2.6	1.6	1.2	1.8	
17	9.2	11	16	6.7	228	18	6.0	3.9	2.5	1.6	2.2	1.8	
18	9.3	11	13	7.6	260	15	5.9	8.3	2.4	1.5	1.6	1.6	
19	9.4	9.9	11	12	94	70	5.7	7.8	2.3	1.3	1.2	1.7	
20	9.2	9.2	11	8.9	63	36	6.2	7.5	2.3	1.2	11	1.8	
21	13	9.5	11	8.0	46	24	8.2	4.7	2.3	1.2	11	1.5	
22	11	13	10	7.7	35	20	6.8	4.2	2.3	1.1	2.1	1.5	
23	21	11	11	6.9	29	16	6.0	4.0	2.3	1.6	1.6	1.5	
24	13	10	9.3	6.7	25	14	5.7	4.0	2.8	1.3	1.4	1.6	
25	9.8	9.9	8.7	9.8	21	13	5.6	9.1	2.3	1.3	1.2	1.6	
26	8.6	9.7	8.0	29	19	12	5.2	6.2	2.1	1.3	1.2	1.6	
27	7.8	11	8.3	17	17	12	5.2	6.2	2.0	1.1	1.2	1.6	
28	7.9	49	8.3	13	14	11	5.8	36	2.0	1.1	1.7	1.6	
29	7.4	56	8.0	12	---	11	5.4	10	2.0	1.1	1.3	3.0	
30	6.7	43	7.4	11	---	11	4.9	7.0	2.5	1.1	1.2	1.7	
31	7.7	---	23	10	---	9.8	---	6.5	---	1.1	1.6	---	
TOTAL	328.6	413.0	581.2	313.9	1136.6	547.3	209.6	190.4	92.1	48.8	66.3	132.7	
MEAN	10.6	13.8	18.7	10.1	40.6	17.7	6.99	6.14	3.07	1.57	2.14	4.42	
MAX	39	56	85	29	260	70	11	36	9.1	3.7	11	46	
MIN	6.7	7.9	7.4	6.7	8.6	8.6	4.9	3.7	2.0	1.1	1.1	1.5	
CFSM	.56	.73	.99	.54	2.16	.94	.37	.33	.16	.08	.11	.24	
IN.	.65	.82	1.15	.62	2.25	1.08	.41	.38	.18	.10	.13	.26	
CAL YR 1985	TOTAL	7014.5		MEAN	19.2	MAX	469	MIN	4.0	CFSM	1.02	IN.	13.88
WTR YR 1986	TOTAL	4060.5		MEAN	11.1	MAX	260	MIN	1.1	CFSM	.59	IN.	8.03

## 03567500 SOUTH CHICKAMAUGA CREEK NEAR CHICKAMAUGA, TN

LOCATION.--Lat 35°00'51", long 85°12'35", Hamilton County Hydrologic Unit 06020001, on left bank 0.1 mi upstream from bridge on U.S. Highway 11, 1.5 mi south of Chickamauga, 6.0 mi east of the city hall in Chattanooga, and at mile 12.2.

DRAINAGE AREA.--428 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1928 to September 1978, October 1980 to current year. Monthly discharge only for December 1930, published in WSP 1306. Gage-height record collected October 1978 to September 1980 (fragmentary). Prior to October 1937, published as Chickamauga Creek near Chickamauga.

REVISED RECORDS.--WSP 823: Drainage area. WSP 853: 1937. WSP 1386: 1932.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 644.12 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 7, 1930, nonrecording gage. Oct. 7, 1930, to Oct. 29, 1980, water-stage recorder at site 1,000 ft upstream at datum 7.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--56 years (water years 1929-78, 1981-86), 691 ft<sup>3</sup>/s, 21.92 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft<sup>3</sup>/s, Mar. 17, 1973, gage height, 28.70 ft; maximum gage height, 30.75 ft, Mar. 17, 1973, present datum from floodmarks (backwater from Tennessee River); minimum discharge, 61 ft<sup>3</sup>/s, Oct. 8, 1941.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 18	1830	*5,750	*15.16	No other peak greater than base discharge.			

Minimum discharge, 69 ft<sup>3</sup>/s Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	483	163	585	426	211	359	216	128	136	178	76	99
2	720	162	857	354	208	319	209	125	125	115	73	110
3	449	184	624	269	201	303	203	122	120	105	76	113
4	254	265	436	242	195	285	196	117	116	98	74	955
5	204	290	382	224	206	268	187	117	121	95	75	626
6	176	243	318	210	206	258	181	117	125	89	72	243
7	162	211	275	201	223	247	177	116	116	85	70	152
8	153	196	252	195	208	241	207	116	124	84	77	115
9	147	181	237	187	192	220	212	124	217	80	82	102
10	142	174	220	181	190	212	223	118	318	78	101	95
11	142	168	223	181	380	230	193	114	241	77	88	89
12	136	167	371	178	518	231	182	113	159	75	81	563
13	134	167	1380	174	346	350	178	114	138	74	77	771
14	131	161	1210	168	431	773	171	115	126	84	75	233
15	195	157	650	166	1200	645	181	113	118	89	73	149
16	170	155	494	163	869	479	167	111	112	81	72	123
17	145	164	408	161	1440	380	157	110	107	77	72	110
18	136	181	348	158	5250	324	156	139	108	76	75	101
19	138	171	303	196	4750	939	152	138	104	74	74	110
20	134	165	275	193	3060	1190	151	154	103	73	86	105
21	142	161	260	184	1240	680	156	140	101	71	176	95
22	153	169	242	172	880	517	167	120	104	70	95	90
23	219	179	232	166	722	435	156	115	98	73	84	87
24	209	177	231	163	623	381	146	111	96	78	80	84
25	185	168	214	167	565	334	144	145	94	78	85	83
26	175	166	196	307	490	305	139	131	93	75	73	83
27	161	168	188	395	452	289	138	180	95	74	70	81
28	156	359	187	285	417	268	136	312	92	76	96	80
29	149	668	184	246	---	250	134	293	92	75	161	81
30	152	650	181	236	---	237	133	196	187	73	99	83
31	156	---	253	225	---	224	---	151	---	72	86	---
TOTAL	6208	6590	12216	6773	25673	12173	5148	4315	3886	2602	2654	5811
MEAN	200	220	394	218	917	393	172	139	130	83.9	85.6	194
MAX	720	668	1380	426	5250	1190	223	312	318	178	176	955
MIN	131	155	181	158	190	212	133	110	92	70	70	80
CFSM	.47	.51	.92	.51	2.14	.92	.40	.32	.30	.20	.20	.45
IN.	.54	.57	1.06	.59	2.23	1.06	.45	.38	.34	.23	.23	.51

CAL YR 1985	TOTAL	164388	MEAN	450	MAX	9430	MIN	118	CFSM	1.05	IN.	14.29
WTR YR 1986	TOTAL	94049	MEAN	258	MAX	5250	MIN	70	CFSM	.60	IN.	8.17



## TENNESSEE RIVER BASIN

## 03568000 TENNESSEE RIVER AT CHATTANOOGA, TN

LOCATION.--Lat 35°05'12", long 85°16'43", Hamilton County, Hydrologic Unit 06020001, on right bank at Rivermont Golf and Country Club, 0.5 mi downstream from South Chickamauga Creek, 3.0 mi downstream from Chickamauga Dam, 3.5 mi upstream from Walnut Street Bridge in Chattanooga, and at mile 467.6.

DRAINAGE AREA.--21,400 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--April 1874 to current year. Monthly discharges only for some periods, published in WSP 1306. July 1930 to December 1935, published as "at Hales Bar, near Chattanooga." Gage-height records collected in this vicinity since 1874 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 353: 1874-1912. WSP 783: 1917. WSP 823: 1875(M). WSP 973: 1942. WSP 1306: 1916(M). WSP 1386: 1932-34 (station at Hales Bar near Chattanooga).

GAGE.--Water-stage recorder. Datum of gage is 621.12 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 1, 1939, nonrecording or recording gages at several sites from 7.0 mi upstream from Chattanooga to Hales Bar Dam 33 mi downstream at or within 0.2 ft of present datum, except nonrecording gage at Bridgeport, AL, 49.9 mi downstream at different datum Oct. 22, 1913, to Feb. 28, 1915, and Oct. 1, 1918, to Jan. 5, 1921. Auxiliary gages at several sites parts of periods since Feb. 28, 1915. Present auxiliary gage at site 2.2 mi downstream from base gage at same datum.

REMARKS.--No estimated daily discharges. Records good, except for period Jan. 22 to Mar. 5, which are fair. Flow regulated since 1936 by increasing number of upstream reservoirs (see p. 169 and Water Resources Data for adjoining states).

AVERAGE DISCHARGE.--112 years, 36,810 ft<sup>3</sup>/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 410,000 ft<sup>3</sup>/s, Mar. 1, 1875, gage height, 53.8 ft, present datum, at Walnut Street, from rating curve extended above 250,000 ft<sup>3</sup>/s; minimum daily, 1,200 ft<sup>3</sup>/s, Nov. 1, 1953; minimum gage height, 0.0 ft, Sept. 11-14, 1881, Sept. 19, 1883.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 57.9 ft, Mar. 11, 1867, present datum at Walnut Street, discharge about 459,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 66,200 ft<sup>3</sup>/s, Feb. 18; maximum gage height, 16.94 ft, Feb. 18; minimum daily discharge, 4,680 ft<sup>3</sup>/s, Jan. 26; minimum gage height, 11.04 ft, May 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25200	16100	37000	15600	8570	14400	7580	7570	6680	18000	18100	12400
2	28200	13300	37000	18000	5680	11500	7120	5760	6190	11200	16300	13100
3	24300	9650	36700	22100	8910	12400	7250	6790	5520	11300	18300	20400
4	26200	17900	35200	14700	6800	29700	6900	7490	7950	11300	12200	23300
5	20800	21500	37700	14500	6870	32600	7630	7140	7710	16300	11800	23600
6	18700	26800	38100	25400	14000	30400	7630	7000	8690	15800	12200	20800
7	24100	27100	31600	21300	22800	28400	9150	8240	8850	15200	12400	17300
8	24000	26600	19900	23800	12400	13200	6990	9100	9190	19700	9060	15100
9	25700	26100	21900	22300	12700	10300	8810	8620	9120	18600	15300	15800
10	25700	21600	21700	20800	16200	21800	7260	8620	7820	14300	16600	21200
11	23300	25200	35900	14600	30200	20100	7560	8040	9380	22000	10900	20300
12	18100	26100	36500	10800	37500	17700	8020	7870	9580	19600	11300	18000
13	13300	25300	40900	15100	32800	26200	9120	8910	10800	17500	14900	14800
14	17900	24600	32700	21500	27400	22800	8050	8950	12100	18200	15300	15000
15	18700	22300	20100	17800	13200	13600	8350	8840	10000	14100	19200	13300
16	18100	17700	35500	17300	11200	11600	7030	8900	15800	18400	19400	18700
17	24100	13400	36700	16200	17300	19200	7580	8790	15100	23400	14600	18300
18	24100	17800	26700	10500	40600	19800	7370	8090	15600	24400	13000	19700
19	22000	23700	33000	9920	44900	20100	6830	7980	10700	13200	11200	19000
20	16800	24000	32100	17300	42700	34700	7010	8060	18500	11300	15400	12900
21	16100	22200	24500	15100	41600	41800	7220	7380	13500	14400	10800	12700
22	18200	22300	22100	15400	27600	36100	7610	7630	15200	15800	12100	11000
23	24100	20800	17200	12200	24400	29400	7710	8470	10600	17200	16800	17500
24	27000	15700	19500	10500	26700	17600	7580	8140	20700	20000	15700	21500
25	24100	21400	32700	5670	26500	14200	6380	8590	15900	19100	19300	22800
26	13400	25900	36500	4680	24900	12700	6820	8680	15400	17800	14400	24900
27	12000	23200	24200	31500	22900	12500	7950	8110	18000	17700	14700	11700
28	17400	17300	16700	38600	24700	13300	7260	7990	13500	14900	17900	9160
29	18800	22600	15000	28100	---	8370	6610	7630	11500	10600	21000	14300
30	16200	36200	13700	16500	---	8340	6710	6390	14900	10800	14900	15400
31	17000	---	16700	10800	---	8400	---	7190	---	11900	14900	---
TOTAL	643600	654350	885700	538570	632030	613210	225090	246960	354480	504000	459960	513960
MEAN	20760	21810	28570	17370	22570	19780	7503	7966	11820	16260	14840	17130
MAX	28200	36200	40900	38600	44900	41800	9150	9100	20700	24400	21000	24900
MIN	12000	9650	13700	4680	5680	8340	6380	5760	5520	10600	9060	9160
CAL YR 1985	TOTAL	7987150		MEAN	21880	MAX	78300	MIN	7200			
WTR YR 1986	TOTAL	6271910		MEAN	17180	MAX	44900	MIN	4680			



## 03571000 SEQUATCHIE RIVER NEAR WHITWELL, TN

LOCATION.--Lat 35°12'22", long 85°29'48", Marion County, Hydrologic Unit 06020004, on right bank 250 ft upstream from county road bridge, 1.5 mi east of Whitwell, 3.0 mi upstream from bridge on State Highway 27, 4.5 mi downstream from Griffith Creek, and at mile 25.1.

DRAINAGE AREA.--402 mi<sup>2</sup>, includes 18 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--October 1920 to current year. Prior to December 1920, monthly discharges only, published in WSP 1306.

REVISED RECORDS.--WSP 603: 1922(M). WSP 758: 1929(M). WSP 1033: 1943(M). WSP 1386: 1921-22, 1923-25(M), 1927-28(M), 1930(M), 1933(M). WSP 1910: Drainage area. WDR TN-76-1: 1973-75(P).

GAGE.--Water-stage recorder. Datum of gage is 632.73 ft above National Geodetic Vertical datum of 1929 (levels by Tennessee Valley Authority). Prior to Sept. 18, 1927, nonrecording gage at same site at datum 0.03 ft higher. Sept. 18, 1927, to Sept. 30, 1930, nonrecording gage at bridge 15 ft upstream at present datum.

REMARKS.--Estimated daily discharges: May 25-28. Records good. Prior to 1950, some diurnal fluctuation caused by small mills above station. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--66 years, 738 ft<sup>3</sup>/s, 24.93 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft<sup>3</sup>/s, Mar. 16, 1973, gage height, 17.65 ft; minimum, 16 ft<sup>3</sup>/s, Sept. 6-21, 27, 28, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1867 reached a stage of about 19 ft from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 19	0100	*7,250	*13.50	No other peak greater than base discharge.			

Minimum discharge, 39 ft<sup>3</sup>/s Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	225	144	1380	219	198	571	333	152	291	72	49	48	
2	753	159	1110	236	198	523	316	148	227	75	48	56	
3	438	172	888	241	206	493	300	143	187	74	47	59	
4	355	181	720	240	243	462	286	138	167	79	44	128	
5	276	272	600	235	353	433	270	133	161	86	42	274	
6	218	335	517	224	707	410	255	131	147	90	41	212	
7	186	311	442	215	1420	387	246	128	137	80	40	193	
8	163	285	387	207	1350	359	263	128	132	72	51	152	
9	149	253	347	195	1070	338	306	133	132	67	45	123	
10	139	229	312	190	848	323	305	126	129	65	44	104	
11	132	210	289	187	900	315	278	121	301	61	54	92	
12	127	194	297	183	824	306	263	121	239	61	58	118	
13	123	183	349	178	705	501	249	119	176	60	66	106	
14	122	174	399	171	680	886	236	115	149	61	73	93	
15	125	165	404	166	1080	872	224	112	133	79	59	86	
16	124	162	395	162	1120	844	212	110	121	90	53	81	
17	119	159	369	157	1630	717	204	106	112	86	53	76	
18	117	169	340	156	5730	624	196	108	106	75	52	71	
19	114	170	307	164	4640	1060	190	110	99	71	52	72	
20	120	183	286	171	2990	1230	187	106	94	69	52	237	
21	122	183	272	173	1880	1030	191	102	90	72	57	168	
22	122	182	255	172	1370	850	189	100	87	74	54	186	
23	128	205	249	171	1110	720	185	99	85	63	50	125	
24	178	216	243	165	947	629	180	96	81	61	48	111	
25	166	226	230	166	848	560	177	104	78	58	46	103	
26	161	228	212	179	752	510	170	143	75	56	44	95	
27	158	262	200	192	700	471	165	430	74	54	43	91	
28	155	943	196	188	635	437	162	1450	72	56	46	84	
29	150	1890	189	195	---	406	160	1100	73	54	55	79	
30	147	1770	182	198	---	381	155	516	75	53	47	73	
31	143	---	188	198	---	354	---	398	---	52	44	---	
TOTAL	5755	10215	12554	5894	35134	18002	6853	7026	4030	2126	1557	3496	
MEAN	186	341	405	190	1255	581	228	227	134	68.6	50.2	117	
MAX	753	1890	1380	241	5730	1230	333	1450	301	90	73	274	
MIN	114	144	182	156	198	306	155	96	72	52	40	48	
CFSM	.46	.85	1.01	.47	3.12	1.45	.57	.56	.33	.17	.12	.29	
IN.	.53	.95	1.16	.55	3.25	1.67	.63	.65	.37	.20	.14	.32	
CAL YR 1985	TOTAL	179724		MEAN	492	MAX	5640	MIN	74	CFSM	1.22	IN.	16 63
WTR YR 1986	TOTAL	112642		MEAN	309	MAX	5730	MIN	40	CFSM	.77	IN.	10.42

## TENNESSEE RIVER BASIN

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN  
(National stream-quality accounting network station)

LOCATION.--Lat 35°00'41", long 85°41'51", Marion County, Hydrologic Unit 06030001, on right bank, 0.5 mi downstream from Tennessee State Highway 156, 0.5 mi downstream from Battle Creek, 0.5 mi east of South Pittsburg, 4.6 mi downstream from Sequatchie River, 6.5 mi downstream from Nickajack Dam, and at mile 418.2.

DRAINAGE AREA.--22,640 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1930 to current year. Published as "at Hales Bar, near Chattanooga, Tenn." July 1930 to July 1966.

REVISED RECORDS.--WSP 853: Drainage area. WSP 973: 1942. WSP 1306 (monthly runoff). WSP 1386: 1932-34.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 581.01 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 13, 1932, at site 12.9 mi upstream at datum 7.85 ft higher. Feb. 13, 1932, to July 17, 1966, at site 11.5 mi upstream at datum 7.50 ft higher. Since Jan. 27, 1939, auxiliary water-stage recorder at site 10.6 mi downstream.

REMARKS.--Records good except for estimated daily discharges, Nov. 4 to Dec. 9, which are fair. Flow regulated since 1936 by increasing number of reservoirs above station (see p. 169 and Water Resources Data for adjoining states).

AVERAGE DISCHARGE.--56 years, 37,680 ft<sup>3</sup>/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 315,000 ft<sup>3</sup>/s, Mar. 18, 1973, gage height, 34.33 ft; minimum daily, 2,900 ft<sup>3</sup>/s, Nov. 1, 15, 1953; minimum gage height, 1.21 ft, Oct. 27, 1931, site and datum used 1932-65.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 44.6 ft, March 1867, site and datum used 1932-65. Flood of Mar. 8, 1917, reached a stage of 37.4 ft, site and datum used 1932-65, discharge, 320,000 ft<sup>3</sup>/s, from rating curve extended above 225,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 76,200 ft<sup>3</sup>/s, Feb. 19; maximum gage height, 18.34 ft, Feb. 19; minimum daily discharge, 9,310 ft<sup>3</sup>/s, May 4; minimum gage height 11.75 ft, July 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30900	20600	42000	16700	13700	27200	14400	16400	11000	23200	22600	18500
2	36200	16300	50000	20100	14300	16100	14500	12600	14500	17700	17300	24500
3	35600	13400	45000	25200	18900	16100	12200	10100	12400	15400	21300	24500
4	34000	22200	43000	19100	17400	36600	11900	9310	11200	16000	18800	26300
5	23200	25900	41000	16600	14900	39800	14800	14100	13200	17700	19300	29300
6	17500	30000	41000	33900	24500	36900	11300	15300	15200	18500	13800	23900
7	30000	31000	31000	26300	30000	36200	16400	16900	12900	21900	20000	19500
8	24500	35000	22000	28500	19600	20000	14500	15600	12500	24800	11800	20500
9	26200	30000	24000	27600	19100	12300	17200	15400	17500	22900	17900	23400
10	33600	20000	25300	20800	31000	27800	12200	11400	14700	18500	19100	28200
11	27500	24000	41700	20500	36600	27900	10800	11600	15200	26800	16100	27000
12	18500	30000	41300	12900	44000	24200	10500	14800	14000	22800	16100	19400
13	13100	28000	47700	21300	41800	32100	9380	14500	14200	20800	17100	15300
14	27300	27000	43800	25600	43900	28800	12800	16100	15300	22700	21600	16300
15	22400	31000	23900	21600	36100	17800	14700	15300	14900	17100	25200	22700
16	23700	18000	38000	18400	16700	16500	16000	15400	20400	24500	19400	20500
17	26900	12000	40100	17300	27700	29100	14700	14700	18300	27200	16100	23400
18	32500	20000	39300	14200	57200	31300	12600	13100	16500	31400	22700	25900
19	26100	25000	39600	11300	69700	35400	9920	14900	16300	18000	16300	22800
20	14900	27000	34800	21400	61900	42400	12100	13700	22900	13300	16700	15500
21	23800	29000	28900	17700	62500	50000	13900	12600	16200	21200	14400	13200
22	27700	24000	21500	18300	42100	38800	11800	13600	14900	21500	17500	18200
23	26800	25000	20600	18500	31500	27700	14200	15100	18500	24000	22300	23000
24	27200	20000	23200	21400	35900	24700	11200	13200	25200	25500	15200	26700
25	30100	25000	36100	14100	38000	17200	12700	12500	18300	27600	24800	28200
26	17700	23000	42600	11600	34400	19800	11800	15600	18000	19400	21000	31000
27	15200	28000	28600	35600	31600	20000	12900	17000	24800	18300	16400	16400
28	24600	22000	21800	48100	27700	16200	13500	14500	16200	21700	20300	9430
29	24500	26000	16100	36600	---	13200	13500	17300	15600	16900	23300	23500
30	18800	40000	17500	25400	---	12300	13300	16600	21400	15100	17700	20800
31	18700	---	22900	20300	---	16900	---	12600	---	15300	20200	---
TOTAL	779700	748400	1034300	686900	942700	811300	391700	441810	492200	647700	582300	657830
MEAN	25150	24950	33360	22160	33670	26170	13060	14250	16410	20890	18780	21930
MAX	36200	40000	50000	48100	69700	50000	17200	17300	25200	31400	25200	31000
MIN	13100	12000	16100	11300	13700	12300	9380	9310	11000	13300	11800	9430
CAL YR 1985	TOTAL	10282530		MEAN	28170	MAX	101000	MIN	8930			
WTR YR 1986	TOTAL	8216840		MEAN	22510	MAX	69700	MIN	9310			

## TENNESSEE RIVER BASIN

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03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to July 1986 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1975 to September 1981.

WATER TEMPERATURES: July 1975 to September 1981.

REMARKS.--Flow regulated by many reservoirs (see p. 169 and Water Resources Data for adjoining states).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 211 microsiemens, Sept. 27-28, 1981; minimum, 94 microsiemens, Dec. 31, 1975.

WATER TEMPERATURES: Maximum, 31.0°C, Aug. 26-28, 30, 1975, June 15, 1978; minimum recorded, 2.0°C, Jan. 22, 1977, Feb. 7, 1978.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--A specific conductance of 220 microsiemens was observed on July 24, 1986.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 23...	1215	35700	190	7.70	22.0	750	2.5	6.4	74	K13
JAN 23...	0945	38500	205	8.00	6.0	757	2.5	12.6	102	K11
APR 17...	0920	23300	190	7.90	15.0	749	1.5	8.2	83	K10
JUL 24...	0945	17800	220	8.00	27.0	750	2.2	6.2	79	110

DATE	STREP- TOCOCOI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WH WAT TOTAL FIELD MG/L AS CACO3
OCT 23...	35	77	8	22	5.3	11	23	0.6	1.7	69
JAN 23...	K5	76	12	22	5.1	13	26	0.7	2.0	64
APR 17...	K6	73	8	21	5.0	9.4	21	0.5	1.6	65
JUL 24...	110	82	12	23	5.9	11	22	0.5	1.6	70

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
OCT 23...	2.7	18	12	<0.1	4.1	119	120	0.16	11500	<0.01
JAN 23...	1.2	16	17	<0.1	4.7	118	120	0.16	12300	0.01
APR 17...	1.6	15	9.2	<0.1	3.1	110	100	0.15	6920	0.02
JUL 24...	1.4	21	11	<0.1	3.6	121	120	0.16	5820	0.01

K--Results based on non-ideal colony count.

## TENNESSEE RIVER BASIN

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 23...	0.26	0.04	<0.01	0.4	0.04	0.03	0.02	5	482	84
JAN 23...	0.44	0.02	0.02	0.5	0.03	0.01	0.01	8	832	66
APR 17...	0.32	0.08	0.09	0.6	0.03	0.01	0.02	5	315	87
JUL 24...	<0.10	0.03	0.03	0.5	0.03	0.01	<0.01	8	384	80

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 23...	<10	<1	31	<0.5	<1	3	<3	2	7	<5
JAN 23...	10	<1	25	<0.5	<1	<1	<3	<1	13	<5
JUL 24...	10	<1	29	<0.5	<1	1	<3	1	<3	<5

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 23...	<4	3	<0.1	<10	<1	<1	<1	73	<6	43
JAN 23...	<4	3	<0.1	<10	<1	<1	<1	82	<6	10
JUL 24...	<4	<1	<0.1	<10	1	<1	<1	77	<6	<3

DATE	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
JAN 23...	<0.9	<0.5	2.9	<0.6	2.3	<0.6	0.04	0.21



## TENNESSEE RIVER BASIN

145

03578000 ELK RIVER NEAR PELHAM, TN

LOCATION.--Lat 35°17'48", long 85°52'12", Grundy County, Hydrologic Unit 06030003, on right bank at downstream side of bridge on U.S. Highway 41, 1.1 mi southeast of Pelham, 1.8 mi upstream from Caldwell Creek, and at mile 194.2.

DRAINAGE AREA.--65.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1951 to current year. Prior to November 1951, monthly discharges only, published in WSP 1726.

REVISED RECORDS.--WRD TN 1973: 1963(P), 1965 (M), 1966(P), 1969(M), 1970-71(P).

GAGE.--Water-stage recorder. Datum of gage is 981.62 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, Feb. 6-20, Sept. 4-30, which are fair. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--35 years, 137 ft<sup>3</sup>/s, 28.36 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft<sup>3</sup>/s, Mar. 16, 1973, gage height, 14.08 ft; minimum, 1.0 ft<sup>3</sup>/s, Sept. 27, 28, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 18	unknown	*2,200	*10.27	No other peak greater than base discharge.			

Minimum daily discharge, 3.2 ft<sup>3</sup>/s Aug. 19, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	383	37	346	130	44	81	44	27	48	12	6.2	4.2	
2	482	51	380	94	42	73	42	25	35	29	4.8	4.7	
3	186	56	250	83	41	70	40	22	26	26	4.6	4.8	
4	122	89	185	74	41	64	37	21	39	19	4.4	600	
5	82	150	147	67	164	59	35	20	31	14	4.3	250	
6	59	121	127	58	200	56	33	19	25	12	4.3	100	
7	46	96	102	54	125	51	33	17	21	9.8	4.4	45	
8	37	91	87	48	95	47	155	17	19	8.6	5.1	20	
9	31	75	77	43	80	44	141	16	29	7.6	4.8	10	
10	27	65	68	43	65	43	88	14	30	6.9	5.6	9.0	
11	24	57	64	42	65	42	72	13	25	6.5	13	8.0	
12	22	52	106	39	60	42	62	13	23	6.2	6.5	15	
13	20	47	135	37	55	385	55	13	21	6.0	4.9	9.0	
14	19	44	143	36	200	393	50	12	17	8.3	4.3	7.0	
15	20	40	118	33	450	240	47	11	14	7.2	3.8	6.0	
16	28	42	104	31	200	198	43	10	12	6.6	3.8	5.5	
17	27	139	91	30	650	155	40	9.7	11	6.5	4.0	5.0	
18	23	127	80	29	1850	125	37	9.7	9.7	6.0	3.5	4.5	
19	21	95	67	37	650	212	35	9.6	9.0	5.5	3.2	4.5	
20	19	77	62	51	450	203	34	9.5	8.5	5.3	3.6	10	
21	37	65	58	42	274	155	42	9.5	8.1	5.1	3.2	7.0	
22	92	68	53	38	201	124	56	9.3	7.7	4.9	3.9	5.5	
23	62	71	55	36	161	105	47	9.0	7.2	4.8	4.2	20	
24	59	60	54	33	145	91	40	9.2	6.9	4.7	4.0	7.0	
25	62	55	49	34	146	80	37	13	6.4	4.7	3.6	5.5	
26	53	51	42	53	121	71	36	23	6.1	4.6	3.3	5.0	
27	47	253	39	56	111	65	33	21	5.9	4.9	3.3	9.0	
28	45	631	39	46	94	59	31	75	5.8	4.8	4.0	6.0	
29	45	1070	38	47	---	55	32	277	8.8	4.7	3.4	5.5	
30	40	571	36	49	---	50	30	143	8.1	4.7	3.5	5.0	
31	36	---	48	45	---	47	---	76	---	4.8	3.8	---	
TOTAL	2256	4446	3250	1538	6780	3485	1507	973.5	524.2	261.7	139.3	1197.7	
MEAN	72.8	148	105	49.6	242	112	50.2	31.4	17.5	8.44	4.49	39.9	
MAX	482	1070	380	130	1850	393	155	277	48	29	13	600	
MIN	19	37	36	29	41	42	30	9.0	5.8	4.6	3.2	4.2	
CFSM	1.11	2.26	1.60	.76	3.69	1.71	.77	.48	.27	.13	.07	.61	
IN.	1.28	2.52	1.84	.87	3.84	1.98	.85	.55	.30	.15	.08	.68	
CAL YR 1985	TOTAL	36237.2		MEAN	99.3	MAX	1310	MIN	4.7	CFSM	1.51	IN.	20.55
WTR YR 1986	TOTAL	26358.4		MEAN	72.2	MAX	1850	MIN	3.2	CFSM	1.10	IN.	14.95

## TENNESSEE RIVER BASIN

03584500 ELK RIVER NEAR PROSPECT, TN

LOCATION.--Lat 35°01'39", long 86°56'52", Giles County, Hydrologic Unit 06030004, on right bank 50 ft upstream from county road bridge, 1.1 mi downstream from Richland Creek, 3.2 mi east of Prospect, 5.4 mi upstream from Ford Creek, 7.9 mi upstream from Tennessee-Alabama State line, and at mile 41.5.

DRAINAGE AREA.--1,784 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1904 to February 1908, January 1919 to current year. Published as "near Elkmont, Ala." 1904-8, 1919-34. Record for both sites published January to March 1934.

REVISED RECORDS.--WSP 523: 1904-8, 1919-20. WSP 823: Drainage area. WSP 1436: 1920-22, 1923(M), 1924, 1927, 1929, 1931-32(M).

GAGE.--Water-stage recorder. Datum of gage is 563.29 ft above National Geodetic Vertical Datum of 1929. July 1, 1904, to Feb. 2, 1908, and Jan. 20, 1919, to Mar. 31, 1934, nonrecording gage 11.9 mi downstream at datum 13.52 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Woods Reservoir (station 03579000) since May 1952, and Tims Ford Lake (station 03580740) since December 1970. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--70 years (water years 1905-7, 1920-86), 3,042 ft<sup>3</sup>/s, 23.16 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 117,000 ft<sup>3</sup>/s Mar. 17, 1973, gage height, 40.12 ft, from rating curve extended above 63,000 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 38.17 ft and contracted-opening measurement at gage height 38.96 ft; minimum, 78 ft<sup>3</sup>/s Sept. 29, 1961 (caused by highway construction upstream).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1902 reached a stage of 40.9 ft, discharge, 130,000 ft<sup>3</sup>/s, and may have been equaled by a flood in March 1897, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,300 ft<sup>3</sup>/s at 0100 hours Feb. 19, gage height, 19.28 ft; minimum, 169 ft<sup>3</sup>/s Aug. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	703	2960	2440	1300	692	1650	837	417	1670	1100	201	292
2	975	3500	2670	1360	663	1750	868	397	1300	783	189	282
3	1090	2570	2810	1240	666	1460	868	376	1460	1220	206	278
4	921	1900	2620	1190	687	1190	867	355	2140	933	196	589
5	777	1830	4030	1080	1890	1870	829	362	5030	816	180	2320
6	701	2480	3570	840	2590	2910	820	399	3090	500	174	1420
7	662	2360	3490	804	2040	2730	786	418	1960	450	175	765
8	664	2060	3600	770	1670	2610	918	441	1480	416	207	500
9	951	2050	2900	838	1410	1870	915	418	3930	572	233	392
10	792	1640	3230	1330	1320	1010	853	394	2720	629	384	344
11	865	952	3250	1250	1300	937	763	402	1800	604	359	317
12	892	944	3270	767	1440	841	767	406	1490	588	324	2330
13	878	1620	2180	735	1610	8910	729	429	1180	603	293	2210
14	636	2080	2390	794	2320	9730	705	437	968	595	274	1130
15	893	1170	3170	979	5450	5240	687	409	847	492	230	634
16	1110	1650	3470	993	4110	4130	674	385	762	719	261	494
17	1050	2030	3020	970	5580	3090	630	370	696	654	714	683
18	990	1380	2580	898	15800	2470	635	358	642	601	560	467
19	958	1310	1870	756	14000	6900	764	388	587	570	391	720
20	881	1830	2370	771	5840	5890	768	452	541	582	304	806
21	658	1820	2450	830	3870	3700	796	410	506	387	267	855
22	724	1980	1850	872	2990	2840	821	387	473	286	238	623
23	911	1670	949	785	2410	2320	779	373	439	428	220	499
24	888	1470	900	695	2030	1950	619	373	413	518	209	669
25	1130	879	837	690	2110	1670	572	450	391	485	201	642
26	1090	1170	1270	698	2350	1440	549	449	368	479	195	609
27	974	2010	2690	702	2220	1260	533	734	349	489	194	588
28	764	4310	1680	1250	1780	1120	519	7580	339	332	697	591
29	759	4710	1090	1950	---	1020	511	15800	757	236	553	373
30	983	3110	1040	1390	---	949	459	5440	1080	219	429	303
31	1140	---	1070	847	---	890	---	2460	---	218	321	---
TOTAL	27410	61445	74756	30374	90838	86347	21841	42469	39408	17504	9379	22725
MEAN	884	2048	2411	980	3244	2785	728	1370	1314	565	303	758
MAX	1140	4710	4030	1950	15800	9730	918	15800	5030	1220	714	2330
MIN	636	879	837	690	663	841	459	355	339	218	174	278

CAL YR 1985	TOTAL	642228	MEAN	1760	MAX	16500	MIN	240	MEAN†	3010	CFSM†	1.69	IN.†	22.96
WTR YR 1986	TOTAL	524496	MEAN	1437	MAX	15800	MIN	174	MEAN†	2188	CFSM†	1.23	IN.†	16.65

† Adjusted for change in contents in Woods Reservoir and Tims Ford Lake.

NOTE.--Contents (cfs-days) for adjustments furnished by Tennessee Valley Authority.

## 03588000 SHOAL CREEK AT LAWRENCEBURG, TN

LOCATION.--Lat 35°14'40", long 87°21'02", Lawrence County, Hydrologic Unit 06030005, on left bank at Lawrenceburg municipal water-supply intake, 500 ft downstream from Little Shoal Creek, 0.5 mi upstream from Crowson Creek, 0.9 mi west of courthouse in Lawrenceburg, and at mile 55.9.

DRAINAGE AREA.--55.4 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1932 to March 1934, March 1967 to current year.

REVISED RECORDS.--WSP 1306: Drainage area. WSP 2110: 1933.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 784.41 ft above National Geodetic Vertical Datum of 1929. June 7, 1932, to Mar. 31, 1934, nonrecording gage at site 500 ft downstream at datum 4.01 ft lower. Mar. 22, 1967, to Sept. 30, 1970, at site 1,300 ft downstream at datum 7.71 ft lower.

REMARKS.--No estimated daily discharges. Records good. About 6 ft<sup>3</sup>/s were diverted by Lawrenceburg water plant, some of which was returned to the stream through sewage treatment plant 0.6 mi downstream. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--20 years (water years 1933, 1968-86), 103 ft<sup>3</sup>/s, 25.25 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft<sup>3</sup>/s, Mar. 15, 1973, gage height, 18.71 ft, from rating curve extended above 6,700 ft<sup>3</sup>/s on basis of computation of peak flow over dam; minimum 14 ft<sup>3</sup>/s, Aug. 21, 25, 1986.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1846, 20.0 ft present site and datum, Mar. 28, 1902, discharge, 23,000 ft<sup>3</sup>/s; flood of Mar. 21, 1955, reached a stage of 17.2 ft, present site and datum, discharge 18,000 ft<sup>3</sup>/s, from report of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 17	1830	2,070	5.52	May 28	1315	*3,480	*6.98

Minimum discharge, 14 ft<sup>3</sup>/s, Aug. 21, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	46	98	63	27	23	42	43	33	60	33	22	20	
2	32	47	53	28	23	40	41	28	53	37	23	18	
3	31	51	44	27	22	38	41	30	60	30	23	18	
4	30	43	41	28	24	36	39	31	50	30	21	21	
5	31	39	40	27	24	36	39	29	47	29	21	19	
6	30	38	38	26	24	36	38	28	43	29	21	19	
7	30	36	38	25	24	34	37	28	46	32	28	18	
8	27	35	38	25	23	35	39	27	50	29	23	17	
9	28	35	36	25	23	34	36	26	54	28	57	17	
10	27	33	34	26	22	33	35	27	44	27	51	17	
11	27	32	35	26	22	32	35	29	42	26	30	67	
12	28	31	35	26	22	155	35	35	42	27	21	107	
13	27	31	37	24	23	410	34	29	39	28	19	25	
14	36	30	36	24	55	136	33	28	39	29	19	23	
15	34	30	34	23	44	201	33	27	38	37	19	22	
16	26	59	33	23	36	81	32	27	37	27	25	21	
17	27	48	32	23	706	67	34	27	36	26	21	21	
18	27	42	32	27	452	86	33	292	35	26	19	24	
19	27	37	31	27	122	285	34	55	35	26	18	25	
20	27	36	32	24	84	94	34	34	34	25	18	22	
21	27	34	32	24	71	75	33	31	35	24	18	25	
22	26	34	31	22	62	69	34	30	35	23	18	21	
23	42	35	31	23	55	62	31	30	34	24	19	20	
24	30	34	30	22	52	58	31	30	32	23	18	21	
25	27	33	28	23	49	54	30	31	33	23	17	19	
26	29	33	28	24	47	51	30	38	33	24	20	20	
27	29	56	28	22	43	49	31	30	32	24	69	21	
28	29	83	29	22	41	49	28	1170	32	23	64	22	
29	27	51	28	22	---	47	29	138	39	22	21	21	
30	28	44	28	22	---	45	29	170	34	22	19	20	
31	33	---	32	22	---	43	---	72	---	22	19	---	
TOTAL	925	1268	1087	759	2218	2513	1031	2640	1223	835	801	751	
MEAN	29.8	42.3	35.1	24.5	79.2	81.1	34.4	85.2	40.8	26.9	25.8	25.0	
MAX	46	98	63	28	706	410	43	1170	60	37	69	107	
MIN	26	30	28	22	22	32	28	26	32	22	17	17	
CFSM	.54	.76	.63	.44	1.43	1.46	.62	1.54	.74	.49	.47	.45	
IN.	.62	.85	.73	.51	1.49	1.69	.69	1.77	.82	.56	.54	.50	
CAL YR 1985	TOTAL	22408		MEAN	61.4	MAX	818	MIN	25	CFSM	1.11	IN.	15.05
WTR YR 1986	TOTAL	16051		MEAN	44.0	MAX	1170	MIN	17	CFSM	.79	IN.	10.78



## TENNESSEE RIVER BASIN

03588400 CHISHOLM CREEK AT WESTPOINT, TN

LOCATION.--Lat 35°08'04", long 87°31'45", Lawrence County, Hydrologic Unit 06030005, on left bank at downstream side of pier of county road bridge, 0.3 mi northeast of Westpoint, and at mile 1.2.

DRAINAGE AREA.--43.0 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 600.22 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--24 years, 84.8 ft<sup>3</sup>/s, 26.78 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,900 ft<sup>3</sup>/s, Mar. 15, 1973, gage height, 14.74 ft, from rating curve extended above 4,100 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; minimum, 8.4 ft<sup>3</sup>/s, July 28, 29, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 28	1700	*2,800	*8.82	No other peak greater than base discharge.			

Minimum discharge, 9.5 ft<sup>3</sup>/s Aug. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	63	87	30	21	41	35	22	130	21	11	16
2	32	62	86	27	21	39	32	23	118	20	10	17
3	25	64	73	26	21	37	32	20	112	20	11	16
4	23	58	63	25	22	34	31	19	89	17	11	20
5	21	48	57	24	25	32	29	19	74	16	10	54
6	20	42	50	24	23	32	28	19	61	15	9.9	24
7	20	37	44	24	23	30	28	19	58	15	11	19
8	20	33	41	23	22	28	31	18	74	14	15	16
9	20	30	38	22	22	28	28	17	127	17	25	15
10	21	28	35	24	23	28	26	17	89	15	108	14
11	21	26	35	23	23	28	26	18	74	14	29	24
12	19	25	35	23	21	58	25	19	60	13	19	172
13	19	25	35	23	21	208	25	17	47	14	15	37
14	21	24	32	23	50	139	24	17	39	17	14	22
15	41	23	30	23	79	139	24	16	34	54	13	18
16	27	56	29	22	62	116	23	16	30	40	15	17
17	21	57	29	23	254	99	23	15	27	24	25	16
18	20	65	28	23	524	92	23	51	25	43	18	15
19	20	54	26	29	248	222	22	59	22	21	15	21
20	20	47	28	26	164	161	24	31	21	18	13	18
21	20	41	27	24	128	128	26	22	21	16	13	21
22	19	39	27	23	107	109	24	20	21	14	13	34
23	70	36	28	22	90	94	22	20	20	13	12	20
24	97	33	28	22	79	80	22	21	19	13	12	17
25	52	32	26	22	66	68	21	44	18	13	12	16
26	39	32	23	23	59	59	21	53	17	13	12	16
27	34	52	25	21	53	51	20	100	17	13	17	17
28	33	135	25	20	47	46	20	1130	17	12	30	16
29	30	97	24	23	---	41	20	430	21	12	17	14
30	28	79	24	22	---	39	20	242	23	11	14	14
31	37	---	29	21	---	37	---	167	---	11	14	---
TOTAL	932	1443	1167	730	2298	2343	755	2701	1505	569	563.9	756
MEAN	30.1	48.1	37.6	23.5	82.1	75.6	25.2	87.1	50.2	18.4	18.2	25.2
MAX	97	135	87	30	524	222	35	1130	130	54	108	172
MIN	19	23	23	20	21	28	20	15	17	11	9.9	14
CFSM	.70	1.12	.87	.55	1.91	1.76	.59	2.03	1.17	.43	.42	.59
IN.	.81	1.25	1.01	.63	1.99	2.03	.65	2.34	1.30	.49	.49	.65

CAL YR 1985	TOTAL	17486	MEAN	47.9	MAX	274	MIN	16	CFSM	1.11	IN.	15.13
WTR YR 1986	TOTAL	15762.9	MEAN	43.2	MAX	1130	MIN	9.9	CFSM	1.00	IN.	13.64



## 03588500 SHOAL CREEK AT IRON CITY, TN

LOCATION.--Lat 35°01'27", long 87°34'44", Lawrence County, Hydrologic Unit 06030005, near center of span on downstream side of bridge on county road, 400 ft downstream from Holly Creek, 1,350 ft upstream from Louisville and Nashville Railroad bridge, 1,350 ft northeast of Iron City Post Office, and at mile 22.3.

DRAINAGE AREA.--348 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1925 to current year.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1113: 1927(M). WSP 1436: 1926(M), 1927-29, 1930(M), 1932, 1933(M).

GAGE.--Water-stage recorder. Datum of gage is 534.22 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 25, 1931, nonrecording gage at railroad bridge, 1,350 ft downstream at datum 0.85 ft lower. Feb. 25, 1931, to Sept. 30, 1933, nonrecording gage at site 825 ft downstream and Oct. 1, 1933, to Sept. 30, 1957, water-stage recorder at site 750 ft downstream at datum 0.69 ft higher.

REMARKS.--Estimated daily discharges: June 24-26. Records good. Prior to January 1951, diurnal fluctuation at low flow caused by powerplant near Lawrenceburg. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--61 years, 644 ft<sup>3</sup>/s, 25.13 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 132,000 ft<sup>3</sup>/s, Mar. 21, 1955, gage height, 27.25 ft, site and datum then in use, present site and datum, 28.4 ft from high water profile, rating curve extended above 50,000 ft<sup>3</sup>/s on basis of slope-area measurement made 1,500 ft downstream; minimum, 38 ft<sup>3</sup>/s, Aug. 31, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1902 reached a stage about 3 ft higher than that of Mar. 21, 1955, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,500 ft<sup>3</sup>/s, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 18	0600	8,010	12.16	May 29	0030	*10,100	*13.67

Minimum discharge, 79 ft<sup>3</sup>/s, Aug. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	261	333	535	237	167	320	306	166	761	169	84	124	
2	260	509	598	214	165	303	292	191	600	173	81	130	
3	199	401	505	207	166	290	282	173	532	172	82	127	
4	175	386	446	201	167	274	273	163	493	159	84	138	
5	157	331	411	196	191	265	262	161	425	148	81	212	
6	144	290	372	188	195	255	253	160	379	143	83	169	
7	139	260	335	191	207	245	249	160	353	136	94	133	
8	135	237	311	182	197	236	266	157	405	132	131	120	
9	130	216	292	178	193	231	258	152	843	132	121	111	
10	133	203	275	186	195	227	236	146	572	128	301	108	
11	131	194	264	184	200	223	229	153	459	132	228	110	
12	129	187	273	181	185	267	224	164	398	130	168	808	
13	126	180	271	183	181	1630	222	160	328	142	122	378	
14	131	177	261	177	271	1140	221	161	287	150	111	208	
15	274	173	239	177	683	1260	217	147	260	164	105	163	
16	239	311	232	173	552	948	205	143	240	226	111	146	
17	181	510	227	175	2430	753	202	140	223	155	204	135	
18	165	417	221	177	5980	664	202	1220	210	146	161	130	
19	156	358	211	211	1970	1670	198	1310	195	132	125	186	
20	153	310	218	209	1210	1300	202	472	189	120	113	215	
21	151	275	215	193	916	948	214	312	181	112	106	227	
22	150	258	207	186	739	771	204	256	178	108	103	274	
23	214	239	216	177	622	664	192	233	181	101	101	201	
24	587	223	212	172	537	579	191	219	165	100	102	164	
25	346	211	202	175	471	512	187	279	150	98	102	148	
26	266	204	191	180	426	458	183	303	138	96	101	138	
27	231	294	189	171	397	415	176	466	130	93	146	132	
28	222	828	192	164	355	381	174	3840	131	91	330	128	
29	206	717	187	174	---	355	170	4620	153	88	228	121	
30	189	566	183	174	---	337	164	1590	178	87	143	115	
31	209	---	214	167	---	318	---	1050	---	85	125	---	
TOTAL	6189	9798	8705	5760	19968	18239	6654	18867	9737	4048	4177	5499	
MEAN	200	327	281	186	713	588	222	609	325	131	135	183	
MAX	587	828	598	237	5980	1670	306	4620	843	226	330	808	
MIN	126	173	183	164	165	223	164	140	130	85	81	108	
CFSM	.57	.94	.81	.53	2.05	1.69	.64	1.75	.93	.38	.39	.53	
IN.	.66	1.05	.93	.62	2.13	1.95	.71	2.02	1.04	.43	.45	.59	
CAL YR 1985	TOTAL	150070		MEAN	411	MAX	3600	MIN	105	CFSM	1.18	IN.	16.04
WTR YR 1986	TOTAL	117641		MEAN	322	MAX	5980	MIN	81	CFSM	.93	IN.	12.58

## TENNESSEE RIVER BASIN

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN  
(National stream-quality accounting network station)

LOCATION.--Lat 35°03'54", long 88°15'08", Hardin County, Hydrologic Unit 06040001, at downstream end of lockwall in lower pool at Pickwick Landing Dam, 16.8 mi upstream from Savannah, Tennessee, and at mile 206.7.

DRAINAGE AREA.--32,820 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1976 to September 1981.

WATER TEMPERATURE: April 1976 to September 1981.

REMARKS.--Flow regulated by Pickwick Landing Dam and many other reservoirs above the station. Continuous discharge records are published under station 03593500 Tennessee River at Savannah, TN.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 326 microsiemens, Sept. 18, 19, 1978; minimum, 116 microsiemens, Apr. 27, 1979.

WATER TEMPERATURES: Maximum, 31.5°C, July 7, 1978; minimum, 2.0°C, Feb. 8, 9, 1978.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 09...	0900	23100	190	7.90	20.0	763	3.5	8.5	93	<1
JAN 16...	1030	35500	180	8.30	4.5	764	2.7	12.0	93	K2
APR 25...	1000	9380	178	7.84	18.0	759	5.6	7.5	80	K1
JUL 24...	1030	29300	180	7.82	29.5	755	3.0	--	--	K13

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3
OCT 09...	K2	72	12	21	4.7	9.3	21	0.5	1.9	--
JAN 16...	<1	72	3	22	4.2	8.7	20	0.5	1.8	.69
APR 25...	K2	74	13	23	4.0	6.8	16	0.4	1.8	61
JUL 24...	63	69	6	21	3.9	8.6	21	0.5	2.0	63

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
OCT 09...	1.5	16	9.9	<0.1	4.3	114	100	0.16	7110	<0.01
JAN 16...	0.7	14	8.9	0.1	4.9	106	110	0.14	10200	0.01
APR 25...	1.7	14	8.7	0.1	2.7	98	98	0.13	2480	0.02
JUL 24...	1.8	15	9.5	0.1	2.3	96	100	0.13	7590	<0.01

K--Results based on non-ideal colony count.

TENNESSEE RIVER BASIN

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03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 09...	0.17	0.02	0.01	0.5	0.06	0.05	<0.01	3	187	95
JAN 16...	0.41	0.03	0.03	0.5	0.04	0.03	0.02	4	383	56
APR 25...	0.41	0.11	0.11	0.5	0.05	0.04	0.03	22	557	51
JUL 24...	<0.10	0.04	0.03	0.5	0.04	0.02	0.01	24	1900	43

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT; DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 09...	40	1	32	<0.5	<1	<1	<3	3	7	5
JAN 16...	20	<1	31	<0.5	<1	<1	<3	3	19	<5
APR 25...	60	<1	22	<0.5	1	3	<3	5	51	<5

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 09...	4	1	<0.1	<10	3	<1	--	70	<6	6
JAN 16...	<4	19	0.6	<10	3	<1	<1	73	<6	15
APR 25...	<4	9	<0.1	<10	1	<1	<1	68	<6	10

## 03593500 TENNESSEE RIVER AT SAVANNAH, TN

LOCATION.--Lat 35°13'29", long 88°15'26", Hardin County, Hydrologic Unit 06040001, on right bank at upstream side of bridge on U.S. Highway 64, at Savannah, 16.8 mi downstream from Pickwick Landing Dam and at mile 189.9.

DRAINAGE AREA.--33,140 mi<sup>2</sup> approximately.

PERIOD OF RECORD.--September 1930 to current year. Gage-height records collected in this vicinity since June 1905, are in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 853: Drainage area. WSP 1306: 1936 (monthly runoff). WSP 2110: 1966. WRD Tenn. 1974: 1973. WRD TN-85-1: 1973.

GAGE.--Water-stage recorder. Datum of gage is 300.00 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 7, 1945, at datum 41.61 ft higher. Oct. 1, 1948, to Apr. 13, 1978, auxiliary water-stage recorder on downstream end of lockwall in lower pool at Pickwick Landing Dam. Since Apr. 13, 1978, auxiliary water-stage recorder over the tailwater elevation well adjacent to the powerhouse which is an integral part of Pickwick Landing Dam, 16.8 mi upstream from base gage at same datum. Apr. 5, 1937, to Jan. 31, 1939, auxiliary nonrecording gage 4.0 mi downstream and Feb. 1, 1939, to Sept. 30, 1948, water-stage recorder 4.3 mi downstream from base gage at same datum.

REMARKS.--TVA release data from Pickwick Landing Dam used Jan. 8-10, Feb. 28 to Mar. 14 and May 6-15 because of missing record. TVA release data used May 16-29 because data were insufficient for computation of discharge. Records fair. Slight regulation since 1924 by Wilson Lake and increasing regulation since 1936 as other reservoirs have been built above station (see p. 169 and Water Resources Data for adjoining states).

AVERAGE DISCHARGE.--56 years, 54,185 ft<sup>3</sup>/s unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 507,000 ft<sup>3</sup>/s Mar. 18, 1973; maximum gage height, 96.11 ft Mar. 20, 1973; minimum discharge 60 ft<sup>3</sup>/s Apr. 23, 1966; minimum gage height, 41.20 ft present datum, Oct. 20, 1931; minimum gage height since Kentucky Lake reached minimum pool elevation on Apr. 7, 1945, 53.40 ft Jan. 12, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1867, 101.2 ft, Mar. 21, 1897, present datum, from floodmarks, discharge, 450,000 ft<sup>3</sup>/s from rating curve extended above 320,000 ft<sup>3</sup>/s. Flood of Jan. 2, 1927, reached a stage of 92.7 ft present datum, discharge, 349,000 ft<sup>3</sup>/s. Minimum stage since 1905, 38.8 ft present datum, Sept. 8, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 99,700 ft<sup>3</sup>/s, Feb. 20; maximum gage height, 65.89 ft, Feb. 21; minimum daily discharge, 1700 ft<sup>3</sup>/s, June 29; minimum gage height, 54.16 ft, Jan. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27800	23800	40400	20800	17600	49200	14900	6990	11400	25800	19900	19500
2	33500	24600	57900	20200	17900	26800	14800	8920	11500	18100	4850	20600
3	35600	21300	62600	29400	18800	20700	14600	9120	11200	25900	4100	23100
4	35500	28200	62000	24500	17900	35800	12900	6860	10700	26400	15100	24500
5	30800	39900	55000	19800	18700	39500	11800	6180	13300	12900	12800	29800
6	26000	39100	54800	28400	26200	42500	12300	6750	25400	10100	16300	23400
7	28400	44500	49900	31200	34100	42900	12000	5960	18400	14500	17800	20500
8	29400	44400	34500	33300	30100	21600	12200	5740	17000	24100	15700	27200
9	30500	37100	40900	30400	26400	16200	13600	5700	27200	25600	6680	24200
10	30200	28000	33100	20900	30700	28100	12500	6040	17300	23200	6070	29500
11	30500	35800	39300	18000	44800	27200	12400	5920	31500	28500	14000	30900
12	22200	33100	42900	17900	46700	29400	12600	5920	38300	13500	20000	33200
13	17400	31600	49100	24100	43500	61900	11900	6040	38400	11200	25500	20500
14	21900	32800	41400	21900	32000	80800	11900	5920	34400	22300	25600	20100
15	20600	31600	29500	21900	37000	56600	12500	5960	26700	20300	24800	18600
16	25100	23300	42000	22400	38300	31200	11700	6000	22200	27200	16400	26400
17	23300	22800	55100	18000	40900	45400	10800	5980	22100	36500	13200	23500
18	31900	25800	54300	18000	77600	51600	10400	5960	19500	28900	15300	21800
19	33000	31200	51400	18200	94000	47300	10200	5960	13600	7800	19600	22600
20	23400	36900	42600	19300	97600	49700	8590	5890	21900	7640	24700	17400
21	20500	38600	35400	21500	90500	62500	11400	5850	3280	21800	19800	10600
22	25000	31900	26300	20200	80100	57900	11600	6000	2180	19600	18700	18000
23	34900	24400	26900	19100	79600	42600	10900	5850	4060	22400	16300	24100
24	39800	17800	20300	18500	79400	26600	10500	5810	24400	25800	11500	28600
25	48400	30700	38800	17700	66500	17300	9790	5960	22200	28400	23100	35000
26	28500	33100	42100	18000	55900	17700	8260	5890	19900	6100	17200	30600
27	21500	31000	33300	30000	55400	18000	8620	5960	16600	4720	17000	10500
28	45900	25100	18500	37000	41300	17800	7640	6040	2210	17100	23600	5700
29	43800	28800	17600	32800	---	17300	5410	32200	1700	17100	27300	9450
30	24300	38800	18900	33500	---	17200	5870	53400	14900	16700	18700	12900
31	23000	---	23600	28200	---	15200	---	39700	---	18100	17400	---
TOTAL	912600	936000	1240400	735100	1339500	1114500	334580	300470	543430	608260	529000	662750
MEAN	29440	31200	40010	23710	47840	35950	11150	9693	18110	19620	17060	22090
MAX	48400	44500	62600	37000	97600	80800	14900	53400	38400	36500	27300	35000
MIN	17400	17800	17600	17700	17600	15200	5410	5700	1700	4720	4100	5700
CAL YR 1985	TOTAL	12443750		MEAN	34090	MAX	121000	MIN	8220			
WTR YR 1986	TOTAL	9256590		MEAN	25360	MAX	97600	MIN	1700			



## TENNESSEE RIVER BASIN

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03596000 DUCK RIVER BELOW MANCHESTER, TN

LOCATION.--Lat 35°28'15", long 86°07'18", Coffee County, Hydrologic Unit 06040002, on right bank 50 ft downstream from Powers Bridge, 2.0 mi southwest of Manchester, 3.2 mi downstream from Little Duck River, 7.0 mi upstream from Crumpton Creek, and at mile 265.4.

DRAINAGE AREA.--107 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1934 to current year.

REVISED RECORDS.--WSP 1436: 1946-47.

GAGE.--Water-stage recorder. Datum of gage is 878.23 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Occasional regulation for short periods during low flow by small reservoirs above station. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--52 years, 184 ft<sup>3</sup>/s, 23.35 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,000 ft<sup>3</sup>/s, May 27, 1973, gage height, 20.95 ft, from rating curve extended above 12,000 ft<sup>3</sup>/s, based on contracted-opening measurement at gage height 15.04 ft, and slope-area measurements at gage heights 18.93 ft and 20.95 ft; minimum, 8.0 ft<sup>3</sup>/s, Aug. 12, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of 23.2 ft from floodmarks by Tennessee Valley Authority, discharge, about 50,000 ft<sup>3</sup>/s. Flood in March 1902 reached approximately same stage.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 18	0815	3,450	8.29	Sept. 4	2030	*4,860	*10.04

Minimum discharge, 20 ft<sup>3</sup>/s Oct. 28, Aug. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	56	26	144	56	34	94	66	40	95	109	24	36	
2	43	25	178	60	34	85	65	38	74	98	24	35	
3	38	27	121	54	35	82	63	36	73	77	24	34	
4	33	31	91	49	37	78	60	35	247	59	22	1900	
5	29	28	82	45	98	74	56	35	326	50	21	1660	
6	27	27	75	42	156	71	55	34	135	45	22	249	
7	25	29	67	40	124	67	60	34	92	42	27	112	
8	24	26	60	38	99	64	112	34	98	40	28	72	
9	24	25	56	36	80	60	141	33	153	37	24	56	
10	24	24	52	36	72	60	96	31	189	41	24	48	
11	24	24	51	36	72	61	77	32	122	36	28	42	
12	24	24	54	35	66	67	67	32	88	34	25	54	
13	24	24	62	35	59	1680	62	32	70	36	23	48	
14	24	24	66	35	117	666	57	32	58	44	22	40	
15	28	24	57	34	492	705	54	30	51	39	22	36	
16	26	39	51	33	274	365	51	29	47	38	23	35	
17	24	41	48	33	1120	240	50	28	43	34	26	34	
18	25	37	46	33	2550	185	49	36	41	31	28	33	
19	25	33	42	37	670	570	47	37	38	30	24	33	
20	24	30	42	39	369	337	48	35	37	28	23	46	
21	33	28	40	38	260	208	100	32	35	27	22	45	
22	26	28	39	36	201	156	92	32	34	26	22	36	
23	26	27	40	35	165	133	73	31	35	24	22	63	
24	27	26	41	34	158	119	61	30	36	24	24	42	
25	25	26	39	35	162	107	55	32	33	25	21	35	
26	24	26	36	36	137	98	51	41	31	40	21	32	
27	24	85	35	36	125	92	47	201	30	31	23	37	
28	25	346	35	34	108	84	45	842	29	26	103	43	
29	24	385	35	34	---	79	42	1140	894	26	56	34	
30	24	174	35	35	---	74	41	303	296	24	32	30	
31	26	---	43	35	---	71	---	143	---	24	31	---	
TOTAL	855	1719	1863	1194	7874	6832	1943	3500	3530	1245	861	5000	
MEAN	27.6	57.3	60.1	38.5	281	220	64.8	113	118	40.2	27.8	167	
MAX	56	385	178	60	2550	1680	141	1140	894	109	103	1900	
MIN	24	24	35	33	34	60	41	28	29	24	21	30	
CFSM	.26	.54	.56	.36	2.63	2.06	.61	1.06	1.10	.38	.26	1.56	
IN.	.30	.60	.65	.42	2.74	2.38	.68	1.22	1.23	.43	.30	1.74	
CAL YR 1985	TOTAL	33996		MEAN	93.1	MAX	1140	MIN	18	CFSM	.87	IN.	11.82
WTR YR 1986	TOTAL	36416		MEAN	99.8	MAX	2550	MIN	21	CFSM	.93	IN.	12.66

## TENNESSEE RIVER BASIN

## 03598000 DUCK RIVER NEAR SHELBYVILLE, TN

LOCATION.--Lat 35°28'49", long 86°29'57", Bedford County, Hydrologic Unit 06040002, on right bank 150 ft downstream from Sims Bridge, 2.1 mi upstream from Sugar Creek, 2.2 mi west of Shelbyville, 2.9 mi downstream from Flat Creek, and at mile 216.2.

DRAINAGE AREA.--481 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1933 to current year. Prior to April 1934, monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 783: 1934. WSP 853: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 683.51 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 2, 1966, at datum 2.0 ft higher.

REMARKS.--No estimated daily discharges. Records good. Prior to 1948, diurnal fluctuation caused by powerplant upstream. Flow regulated by Normandy Reservoir (station 03596460) since January 1976. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--53 years, 809 ft<sup>3</sup>/s, 22.84 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,900 ft<sup>3</sup>/s, Feb. 13, 1948, gage height, 38.40 ft, present datum, from floodmarks, from rating curve extended above 35,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 5.0 ft<sup>3</sup>/s, Aug. 23, 1936; minimum daily, 20 ft<sup>3</sup>/s, Sept. 2, 1945.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of 39.6 ft present datum, discharge, about 70,000 ft<sup>3</sup>/s, from high water profile by Tennessee Valley Authority. Flood in March 1902 reached a stage about 2.0 ft higher than that in March 1929, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,040 ft<sup>3</sup>/s at 0830 hours Feb. 18, gage height, 15.25 ft; minimum, 81 ft<sup>3</sup>/s, Oct. 9; minimum daily, 88 ft<sup>3</sup>/s, Oct. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	156	216	555	274	101	213	213	120	296	198	185	218		
2	321	222	676	283	99	197	189	129	226	200	182	219		
3	205	227	508	246	99	184	181	141	196	199	182	216		
4	160	241	411	226	116	178	174	148	297	202	180	1810		
5	189	240	359	214	614	171	168	138	317	196	180	3180		
6	184	234	325	199	814	161	163	162	288	195	179	725		
7	181	215	292	191	745	151	164	167	234	185	177	434		
8	145	205	270	194	511	147	271	167	239	188	180	308		
9	88	195	254	191	385	139	345	167	357	181	180	257		
10	88	190	249	186	313	139	230	177	632	184	180	233		
11	143	186	244	196	287	142	195	179	298	180	177	221		
12	182	188	255	196	240	240	179	207	242	181	176	293		
13	181	182	429	193	223	4700	167	232	208	183	177	260		
14	181	181	455	192	615	1750	160	194	191	245	174	219		
15	214	181	449	185	2020	1570	152	180	182	229	171	200		
16	202	229	440	191	950	1030	141	174	176	201	186	200		
17	184	361	439	183	2740	699	137	158	170	190	194	198		
18	188	301	482	159	5590	618	134	166	170	190	189	185		
19	186	229	481	149	1970	2350	132	172	184	191	184	190		
20	183	214	475	213	1070	1670	136	173	180	181	179	188		
21	192	196	473	178	709	1260	174	166	185	177	174	262		
22	194	191	467	154	537	701	175	176	184	174	172	204		
23	190	179	468	134	438	580	148	167	183	172	170	192		
24	199	201	470	121	381	507	132	170	210	170	169	198		
25	188	197	247	120	338	454	126	172	190	330	168	189		
26	206	195	189	120	285	414	122	199	180	273	167	182		
27	222	460	190	121	267	383	120	332	176	215	170	183		
28	223	1050	189	98	239	325	114	2490	171	197	402	187		
29	207	1100	183	108	---	306	111	2970	197	199	337	184		
30	184	663	177	109	---	295	108	797	233	192	212	180		
31	191	---	202	104	---	282	---	447	---	190	201	---		
TOTAL	5757	8869	11303	5428	22696	21956	4961	11437	6992	6188	5954	11715		
MEAN	186	296	365	175	811	708	165	369	233	200	192	391		
MAX	321	1100	676	283	5590	4700	345	2970	632	330	402	3180		
MIN	88	179	177	98	99	139	108	120	170	170	167	180		
(†)	-1500	-800	-3400	-800	+10400	+7300	+1700	+2400	+2700	-3100	-3100	+1900		
MEAN‡	137	269	255	149	1182	944	222	446	323	99.6	92.1	454		
CFSM‡	.28	.56	.53	.31	2.46	1.96	.46	.93	.67	.21	.19	.94		
IN.‡	.33	.62	.61	.36	2.56	2.26	.52	1.07	.75	.24	.22	1.05		
CAL YR 1985	TOTAL	142741	MEAN	391	MAX	4780	MIN	86	MEAN‡	392	CFSM‡	.81	IN.‡	11.07
WTR YR 1986	TOTAL	123256	MEAN	338	MAX	5590	MIN	88	MEAN‡	375	CFSM‡	.78	IN.‡	10.59

† Change in contents, in cfs-days, in Normandy Lake.

‡ Adjusted for change in contents.

NOTE.--Contents (cfs-days) for adjustments furnished by Tennessee Valley Authority.

## 03599500 DUCK RIVER AT COLUMBIA, TN

LOCATION.--Lat 35°37'05", long 87°01'56", Maury County, Hydrologic Unit 06040003, on right bank 4 ft downstream from bridge on former U.S. Highway 31, 2 blocks north of public square in Columbia, 0.7 mi downstream from Columbia hydroelectric plant, 2.4 mi upstream from Rutherford Creek, and at mile 132.8.

DRAINAGE AREA.--1,208 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1904 to December 1908, April 1920 to current year. Monthly discharge only for some periods, published in WSP 1306. Gage-height records collected at same site, 1887-95, 1911 (fragmentary), 1947-71, published in reports of U.S. Weather Bureau.

REVISED RECORD.--WSP 783: 1929(M). WSP 853: Drainage area. WSP 1306: 1905-9, 1920-22, 1923(M).

GAGE.--Water-stage recorder. Datum of gage is 535.33 above ft National Geodetic Vertical Datum of 1929. Prior to Jan. 9, 1925, nonrecording gages near this site; all gages at datum 2.37 ft higher prior to Oct. 1, 1933.

REMARKS.--Flow regulated by Normandy Lake (station 03596460) since Jan. 5, 1976.

COOPERATION.--Records of daily discharge since January 1982 were furnished by Tennessee Valley Authority.

AVERAGE DISCHARGE.--70 years, (water years 1905-8, 1921-86), 1,992 ft<sup>3</sup>/s, 22.39 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,500 ft<sup>3</sup>/s, Mar. 17, 1973; maximum gage height, 51.75 ft Feb. 14, 1948; no flow Oct. 22, 1922.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 30, 1902, reached a stage of 48.0 ft, present datum, discharge, 50,700 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT PERIOD.--

Maximum Daily						Minimum Daily					
Water Year	Date	Discharge (ft <sup>3</sup> /s)	Water Year	Date	Discharge (ft <sup>3</sup> /s)	Water Year	Date	Discharge (ft <sup>3</sup> /s)	Water Year	Date	Discharge (ft <sup>3</sup> /s)
1982	Jan. 5	19,600	1985	Nov. 29	23,500	1982	Sept. 30	106	1985	Sept. 24	157
1983	May 22	35,000	1986	Feb. 19	13,900	1983	Oct. 4	86	1986	Oct. 13	122
1984	May 9	30,000				1984	Sept. 20	146			

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	337	5590	631	5060	3460	2840	3300	301	216	297	258
2	138	324	7280	758	4530	2510	2510	2020	270	208	230	795
3	137	311	3740	7320	4000	2290	1940	1430	252	200	274	1260
4	137	287	2030	17500	4610	2220	1730	1130	247	203	227	1630
5	138	252	1440	19600	4200	2060	1560	921	242	203	191	998
6	143	228	1040	12300	3480	2070	1450	773	242	232	181	622
7	144	327	787	5000	2790	1920	1470	1580	241	261	170	438
8	141	324	640	3830	2310	2170	1470	4170	227	308	187	338
9	137	272	542	3180	4170	2020	2290	3470	220	235	289	280
10	137	236	458	2160	6220	1700	2860	1850	209	274	821	245
11	142	213	381	1620	4510	1490	2080	1220	212	365	1720	222
12	145	194	340	1360	3570	1320	1660	948	208	581	1080	205
13	145	187	347	1250	3220	1190	1370	780	198	540	1010	198
14	144	184	385	1100	2690	1080	1170	648	199	445	906	199
15	143	181	438	1020	2180	4680	1030	554	210	290	794	197
16	144	182	558	946	2680	9500	955	485	209	192	510	195
17	147	180	542	872	4760	6720	3620	428	206	206	1060	185
18	227	177	466	837	4400	4550	8150	401	201	222	3000	184
19	251	172	420	952	3640	3780	5030	471	192	400	2560	176
20	250	178	360	2040	3110	2980	2930	485	191	450	2450	169
21	239	175	381	5520	2500	3190	2140	484	189	400	1940	171
22	214	178	1310	12200	2020	5730	1670	528	187	300	1320	175
23	180	184	2200	14300	1740	4980	1330	468	188	287	961	173
24	186	184	2460	17700	1550	3370	1130	377	188	663	964	168
25	305	184	2000	11100	1390	2680	994	323	190	799	1600	166
26	371	190	1540	5520	1250	2320	922	306	183	539	1370	162
27	599	717	1260	4180	1710	1750	1000	289	188	344	975	125
28	1670	2320	1040	3510	3760	1310	2030	289	199	252	772	117
29	1330	2660	860	3090	---	1110	1490	276	220	225	647	112
30	704	1940	712	2760	---	980	1930	248	210	217	355	106
31	454	---	618	3530	---	1730	---	250	---	209	236	---
TOTAL	9381	13478	42165	167686	92050	88860	62751	30902	6419	10266	29097	10269
MEAN	303	449	1360	5409	3288	2866	2092	997	214	331	939	342
MAX	1670	2660	7280	19600	6220	9500	8150	4170	301	799	3000	1630
MIN	137	172	340	631	1250	980	922	248	183	192	170	106
(†)	-2200	-700	+3900	+12300	-1800	+5200	+9000	+1500	-2000	-400	+400	-800
MEAN†	232	426	1486	5806	3223	3034	2392	1045	147	318	952	316
CFSM†	.19	.35	1.23	4.81	2.67	2.51	1.98	.86	.12	.26	.79	.26
IN.†	.22	.39	1.42	5.54	2.78	2.90	2.21	1.00	.14	.30	.91	.29

CAL YR 1981	TOTAL	240463	MEAN	659	MAX	8740	MIN	137	MEAN†	654	CFSM†	.54	IN.†	7.35
WTR YR 1982	TOTAL	563324	MEAN	1543	MAX	19600	MIN	106	MEAN†	1610	CFSM†	1.33	IN.†	18.09

† Change in contents, in cfs-days, in Normandy Lake.

‡ Adjusted for change in contents.



## TENNESSEE RIVER BASIN

## 03599500 DUCK RIVER AT COLUMBIA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	96	160	3180	4590	1220	739	715	2560	1740	838	180	148		
2	93	158	4190	3920	4770	693	2880	2120	1480	1400	187	129		
3	89	154	4390	3660	8940	647	7970	9580	1250	4280	251	108		
4	86	151	3830	3800	6350	594	5490	18500	1420	2390	233	105		
5	134	159	3540	3380	4390	2000	13600	12800	2260	1590	209	139		
6	165	184	4250	2330	3790	16900	29700	4730	1850	1300	224	173		
7	173	381	3800	1720	4280	15300	34300	3800	2050	1070	236	178		
8	160	646	2890	1570	3900	6910	29400	2910	4900	768	200	168		
9	176	649	2390	4220	2900	3610	14300	2700	2440	494	164	164		
10	195	642	2070	5960	4340	2680	8950	2170	1740	396	123	160		
11	196	642	1910	4010	12600	2150	6730	1920	1460	373	148	160		
12	190	608	2450	2870	11200	1870	5430	1830	1180	355	1420	197		
13	196	466	3850	2230	6300	1620	4550	1830	826	333	1050	184		
14	344	357	3120	1870	4490	1450	4900	1440	704	313	634	180		
15	707	273	4130	1540	3500	1330	4640	3790	903	295	399	179		
16	510	210	10200	1220	2890	1150	3450	7410	1060	303	302	187		
17	337	197	11800	1040	2250	942	2560	5620	1970	282	275	181		
18	262	190	6420	899	1770	888	1910	3140	4230	265	272	175		
19	229	201	3910	793	1550	857	1820	15800	5330	251	265	169		
20	210	237	2890	713	1310	815	1520	28900	3130	241	239	162		
21	208	781	2360	1190	1100	970	1150	33600	2410	231	208	187		
22	217	1460	2030	5490	1020	1200	1000	35000	2390	220	192	197		
23	210	2910	1690	6560	1040	1200	2140	32600	2050	211	184	202		
24	204	2440	1450	4600	1780	989	5270	20800	1280	202	176	203		
25	198	3280	1680	3160	1320	876	4930	7940	969	198	172	180		
26	192	2240	19400	2370	1050	809	2900	4720	787	199	138	169		
27	186	1650	30400	1910	896	804	2210	3770	650	197	111	166		
28	180	2070	27600	1610	798	947	1920	3220	657	194	109	163		
29	175	4420	12700	1410	---	999	1660	2630	2100	193	108	159		
30	170	4630	7410	1300	---	835	1550	2350	1150	187	101	154		
31	164	---	5590	1220	---	754	---	2130	---	182	147	---		
TOTAL	6652	32546	197520	83155	101744	73528	209545	282310	56366	19751	8657	5026		
MEAN	215	1085	6372	2682	3634	2372	6985	9107	1879	637	279	168		
MAX	707	4630	30400	6560	12600	16900	34300	35000	5330	4280	1420	203		
MIN	86	151	1450	713	798	594	715	1440	650	182	101	105		
(†)	-1700	-8400	-6700	-600	+2600	+5300	+10500	-500	+1400	-700	-1000	-2600		
MEAN‡	160	805	6155	2663	3727	2543	7335	9091	1926	615	247	80.9		
CFSM‡	.13	.67	5.10	2.20	3.09	2.11	6.07	7.53	1.59	.51	.20	.07		
IN.‡	.15	.74	5.87	2.54	3.21	2.43	6.77	8.68	1.78	.59	.24	.07		
CAL YR 1982	TOTAL	735018	MEAN	2014	MAX	30400	MIN	86	MEAN‡	2032	CFSM‡	1.68	IN.‡	22.83
WTR YR 1983	TOTAL	1076800	MEAN	2950	MAX	35000	MIN	86	MEAN‡	2944	CFSM‡	2.44	IN.‡	33.08

† Change in contents, in cfs-days, in Normandy Lake.

‡ Adjusted for change in contents.



## TENNESSEE RIVER BASIN

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## 03599500 DUCK RIVER AT COLUMBIA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	157	190	5540	2480	1430	2260	4560	3510	585	270	3350	207		
2	157	187	4460	2090	1200	1940	3730	4590	490	233	3610	210		
3	160	212	11900	1880	1040	1720	3240	16600	442	244	2500	202		
4	160	641	26800	1730	1080	1540	5330	28900	412	266	1570	194		
5	195	1000	24600	1450	1110	1690	5710	28200	395	286	1380	184		
6	186	1220	12400	1180	1030	2810	4230	16500	369	245	1380	176		
7	187	819	8020	1060	928	3350	3160	13200	347	380	1290	170		
8	181	556	6250	887	847	2840	2540	28300	328	440	1030	166		
9	175	461	4810	808	786	2290	2160	30000	317	388	1300	163		
10	171	386	4030	825	870	1900	1930	24500	300	294	1050	162		
11	168	312	7680	1410	1450	1550	1780	12600	292	256	737	160		
12	176	295	18700	2150	2470	1270	1180	7280	284	234	1070	160		
13	236	283	18700	1860	2910	1300	1060	4350	338	226	826	157		
14	365	293	9950	1730	5000	1800	935	2470	330	271	552	163		
15	890	1450	6760	1760	5830	2010	839	2400	471	313	449	159		
16	539	2260	5310	1680	4210	2050	752	1930	378	4730	378	152		
17	331	1610	3600	1560	3150	2440	732	1550	322	3320	556	147		
18	290	1070	2660	1550	2600	2480	674	1240	314	5390	449	147		
19	249	836	2270	1730	2110	2890	621	1150	294	4220	327	147		
20	226	2640	1990	1950	1810	3740	572	1050	285	2060	290	146		
21	212	5190	1590	1650	1630	9020	604	958	289	1130	282	152		
22	213	3570	1570	1430	1460	8290	15000	899	857	759	275	154		
23	237	4700	2250	1320	1230	5290	7830	1000	1110	522	241	152		
24	296	9750	2280	2010	1020	4230	4670	890	656	505	191	153		
25	306	7960	1810	1970	952	3200	2480	946	563	378	353	154		
26	273	3740	1500	2710	888	2910	1760	775	405	346	316	151		
27	247	3580	1350	3460	1140	2510	1870	646	358	328	243	148		
28	225	11800	4360	3880	2110	7470	1850	801	316	328	231	147		
29	210	17600	8640	4130	2700	15200	2290	1010	295	297	227	150		
30	200	10000	5220	4350	---	11300	2840	886	291	278	218	149		
31	195	---	3080	4600	---	6680	---	756	---	418	212	---		
TOTAL	7813	94611	220080	63280	54991	119970	86929	239887	12433	29355	26883	4882		
MEAN	252	3154	7099	2041	1896	3870	2898	7738	414	947	867	163		
MAX	890	17600	26800	4600	5830	15200	15000	30000	1110	5390	3610	210		
MIN	157	187	1350	808	786	1270	572	646	284	226	191	146		
(†)	-2200	-6500	-8700	+1500	+3700	+9100	+7000	-300	-1000	+1600	-1800	-3200		
MEAN†	181	2937	6819	2090	2024	4164	3131	7729	381	999	809	561		
CFSM†	.15	2.43	5.64	1.73	1.68	3.45	2.59	6.40	.32	.83	.67	.05		
IN.†	.17	2.71	6.51	1.99	1.81	3.97	2.89	7.38	.35	.95	.77	.05		
CAL YR 1983	TOTAL	1162586	MEAN	3185	MAX	35000	MIN	101	MEAN†	3177	CFSM†	2.63	IN.†	35.70
WTR YR 1984	TOTAL	961114	MEAN	2626	MAX	30000	MIN	146	MEAN†	2624	CFSM†	2.17	IN.†	29.56

† Change in contents, in cfs-days, in Normandy Lake.

‡ Adjusted for change in contents.

## TENNESSEE RIVER BASIN

## 03599500 DUCK RIVER AT COLUMBIA, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	180	2100	6630	1820	3770	1630	1140	604	300	397	297	284		
2	180	3330	5230	3390	4560	1430	1290	898	272	308	256	249		
3	178	4350	4390	2720	3620	1210	1090	1220	259	250	212	216		
4	178	3020	3900	2800	2960	1110	944	1150	253	235	194	199		
5	177	2200	3500	3220	3010	1030	897	905	240	250	183	191		
6	180	1910	3390	2580	4920	975	889	678	229	262	177	187		
7	186	1780	2740	2100	6410	941	884	589	229	266	202	181		
8	235	1640	2190	1860	5300	859	875	2340	223	243	242	182		
9	228	1570	1950	1650	3990	901	776	3970	231	228	374	185		
10	262	2160	1780	1500	3150	1060	689	2340	252	213	429	204		
11	276	4620	1630	1400	5690	1220	630	1550	242	213	306	206		
12	233	4800	1500	1310	13700	1100	589	1310	228	194	237	193		
13	210	3100	1410	1160	12100	997	560	1050	221	187	203	185		
14	200	2340	1320	1050	6730	932	536	834	256	184	191	186		
15	195	2300	1230	952	5090	850	826	686	261	180	177	180		
16	193	3680	1140	892	4230	791	946	572	231	202	225	169		
17	652	3840	1070	910	3160	737	876	506	299	191	1350	176		
18	873	4390	1020	1130	3140	684	723	437	1250	266	1570	174		
19	795	14200	997	1250	4390	636	611	393	1660	239	1180	175		
20	626	18400	1270	1130	6750	594	527	389	1280	195	686	171		
21	1330	9320	2600	953	5400	579	464	395	784	179	421	170		
22	2850	5200	3880	856	4090	896	421	624	540	175	353	172		
23	7770	4010	4130	797	3230	1660	402	853	389	184	364	199		
24	14200	3270	3210	824	2860	2030	623	695	316	184	295	157		
25	9760	2810	3390	825	2710	1960	682	516	290	181	262	160		
26	3980	2460	3740	843	2460	1640	603	413	284	191	244	537		
27	2310	2990	3110	806	2260	1370	541	355	384	244	255	682		
28	2820	15300	2570	783	1890	1210	578	359	337	240	288	1100		
29	8880	23500	2450	742	---	1120	666	350	270	248	287	568		
30	6760	14900	1980	738	---	1030	654	352	251	260	218	278		
31	3120	---	1760	1290	---	1050	---	329	---	253	257	---		
TOTAL	70017	169490	81107	44281	131570	34232	21932	27662	12261	7042	11935	7916		
MEAN	2259	5650	2616	1428	4699	1104	731	892	409	227	385	264		
MAX	14200	23500	6630	3390	13700	2030	1290	3970	1660	397	1570	1100		
MIN	177	1570	997	738	1890	579	402	329	221	175	177	157		
(†)	+400	-9900	-9400	+2900	+3000	+5300	+3100	+300	-1700	-2100	-2000	-2700		
MEAN‡	2272	5320	2313	1522	4806	1275	834	902	352	159	320	174		
CFSM‡	1.88	4.40	1.91	1.26	3.98	1.06	.69	.75	.29	.13	.26	.14		
IN.‡	2.17	4.91	2.21	1.45	4.14	1.22	.77	.86	.33	.15	.31	.16		
CAL YR 1984	TOTAL	959224	MEAN	2621	MAX	30000	MIN	146	MEAN‡	2615	CFSM‡	2.16	IN.‡	29.46
WTR YR 1985	TOTAL	619445	MEAN	1697	MAX	23500	MIN	157	MEAN‡	1662	CFSM‡	1.38	IN.‡	18.66

† Change in contents, in cfs-days, in Normandy Lake.

‡ Adjusted for change in contents.

## TENNESSEE RIVER BASIN

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## 03599500 DUCK RIVER AT COLUMBIA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	273	595	1840	285	175	701	598	156	1380	221	189	296
2	400	869	1680	344	170	608	549	150	1040	276	184	258
3	717	913	1710	452	168	542	457	144	803	258	179	255
4	650	932	1380	453	166	495	400	147	1520	233	176	260
5	422	797	1080	403	180	454	370	151	2190	230	174	453
6	285	657	904	360	339	422	344	158	1890	231	174	3660
7	254	550	785	331	1430	393	415	163	1480	236	175	1450
8	241	465	682	307	1330	358	410	160	1150	219	186	743
9	219	390	595	284	1060	330	447	173	1120	217	191	491
10	203	343	531	282	812	313	549	172	987	230	188	358
11	160	311	487	276	674	300	542	172	1130	215	205	309
12	127	286	464	269	580	505	415	185	968	206	208	300
13	122	267	469	272	507	6820	348	251	712	209	194	289
14	176	257	521	268	656	11900	315	241	576	208	185	354
15	216	244	685	262	2880	7700	286	289	460	210	179	315
16	215	285	691	255	4520	6010	266	227	383	231	212	264
17	230	408	657	249	5020	3710	255	194	338	234	204	233
18	241	779	629	254	12500	2520	237	195	304	274	201	224
19	213	983	611	258	13900	2560	226	203	278	243	219	247
20	204	747	637	253	6580	4860	229	185	255	232	201	830
21	200	552	620	234	3460	3540	232	177	262	217	189	492
22	197	464	607	284	2350	2580	224	174	256	205	181	318
23	219	416	601	268	1780	1880	237	171	247	192	177	310
24	288	389	595	234	1450	1490	253	174	241	186	176	265
25	287	349	591	213	1220	1270	236	201	233	182	174	233
26	259	342	549	198	1070	1100	209	211	235	184	172	222
27	243	454	382	191	926	980	193	207	241	315	183	212
28	232	1460	292	189	808	886	184	2500	222	353	699	203
29	248	2740	277	189	---	799	173	8400	216	242	384	198
30	247	2470	269	180	---	702	164	6730	216	208	507	195
31	264	---	276	174	---	643	---	2340	---	202	425	---
TOTAL	8252	20714	22097	8471	66711	67371	9763	25001	21333	7199	7091	14237
MEAN	266	690	713	273	2383	2173	325	806	711	232	229	475
MAX	717	2740	1840	453	13900	11900	598	8400	2190	353	699	3660
MIN	122	244	269	174	166	300	164	144	216	182	172	195
(†)	-1500	-800	-3400	-800	+10400	+7300	+1700	+2400	+2700	-3100	-3100	+1900
MEAN‡	218	664	603	247	2754	2409	382	884	801	132	129	538
CFSM‡	.18	.55	.50	.20	2.28	1.99	.32	.73	.66	.11	.11	.45
IN.‡	.21	.61	.58	.24	2.37	2.30	.35	.84	.74	.13	.12	.50
CAL YR 1985	TOTAL	349894	MEAN	959	MAX	13700	MIN	122	MEAN‡	960	CFSM‡	.79
WTR YR 1986	TOTAL	278240	MEAN	762	MAX	13900	MIN	122	MEAN‡	800	CFSM‡	.66
											IN.‡	10.78
											IN.‡	8.99

† Change in contents, in cfs-days, in Normandy Lake.

‡ Adjusted for change in contents.

## TENNESSEE RIVER BASIN

03600500 BIG BIGBY CREEK AT SANDY HOOK, TN

LOCATION.--Lat 35°29'19", long 87°13'59", Maury County, Hydrologic Unit 06040003, on right bank 45 ft west of Louisville and Nashville Railroad track, 0.2 mi downstream from bridge on U.S. Highway 43, 0.4 mi northeast of Sandy Hook, 0.5 mi upstream from Dry Creek, 3.5 mi southwest of Mount Pleasant, and at mile 17.9.

DRAINAGE AREA.--17.5 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1953 to current year.

REVISED RECORDS.--WRD TN 1974: 1954(P), 1955, 1956-57(P), 1958(M), 1961(M), 1962-65(P), 1966 (M), 1967-68(P), 1969(M), 1970(P), 1971(M), 1972-73(P).

GAGE.--Water-stage recorder. Datum of gage is 670.44 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good above 10 ft<sup>3</sup>/s and fair below. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--33 years, 28.0 ft<sup>3</sup>/s, 21.73 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,700 ft<sup>3</sup>/s, Mar. 15, 1973, gage height, 11.55 ft, from rating curve extended above 1,400 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; minimum, 1.0 ft<sup>3</sup>/s, Sept. 10, 1958, and July 9, 1959, caused by removal of gravel 0.2 mi upstream; minimum natural discharge, 1.1 ft<sup>3</sup>/s, Aug. 5, 6, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 28	1030	*2,400	*8.00	No other peak greater than base discharge.			

Minimum discharge, 1.1 ft<sup>3</sup>/s, Aug. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	16	82	53	7.4	5.3	7.8	7.8	7.4	22	4.0	1.7	3.6	
2	9.7	30	31	7.1	5.3	7.5	7.6	7.3	17	5.0	1.7	3.4	
3	8.0	24	23	7.0	5.3	7.4	7.4	7.1	16	4.2	2.1	4.9	
4	7.2	17	18	6.8	5.5	7.0	7.2	6.9	19	3.4	1.5	4.1	
5	6.5	12	15	6.6	6.6	6.7	6.7	6.7	15	3.2	1.3	4.1	
6	6.1	8.7	12	6.5	7.0	6.6	6.6	6.9	13	3.1	2.0	3.0	
7	5.8	7.5	11	6.5	7.4	6.6	7.1	6.7	12	3.2	4.5	2.5	
8	5.6	6.6	9.5	6.0	6.7	6.4	7.4	6.1	14	3.2	5.4	2.2	
9	5.6	6.0	8.5	5.8	6.4	6.3	6.7	5.8	15	3.5	3.8	2.2	
10	5.7	5.6	8.4	6.2	6.7	6.4	6.6	6.2	11	4.8	4.1	2.0	
11	5.7	5.2	8.5	6.0	6.3	6.3	6.5	6.9	9.6	4.3	17	3.4	
12	5.9	5.1	8.7	5.9	5.7	79	6.3	6.7	8.4	3.9	5.1	18	
13	6.2	5.1	12	5.9	5.6	206	6.3	6.5	6.9	4.3	4.1	4.9	
14	6.9	5.0	10	5.8	27	121	6.5	6.1	6.0	4.7	3.4	3.6	
15	13	6.5	9.2	5.7	35	171	6.4	6.0	5.4	6.4	2.9	3.2	
16	8.2	30	9.0	5.6	25	74	6.3	6.0	4.8	5.2	5.6	3.2	
17	7.4	36	8.5	5.6	184	47	6.2	5.9	4.5	4.5	6.7	3.1	
18	7.5	25	8.1	5.7	196	44	6.0	11	4.3	3.9	4.3	3.8	
19	7.3	16	7.5	7.1	81	116	6.1	13	4.2	3.3	3.5	11	
20	7.1	11	7.9	6.4	48	66	7.4	8.1	4.1	2.9	2.8	6.8	
21	6.7	9.0	7.3	6.0	32	44	7.8	6.9	3.8	2.7	2.5	24	
22	5.8	7.6	7.5	5.9	24	33	6.9	6.5	3.9	2.5	2.3	16	
23	19	6.4	7.9	5.7	19	26	6.6	6.6	3.9	2.3	2.0	6.8	
24	12	5.7	7.6	5.6	15	20	6.6	7.1	4.0	2.0	1.9	4.8	
25	7.3	5.4	6.8	5.8	13	16	6.6	8.7	3.5	2.1	1.6	4.0	
26	6.0	8.3	6.3	5.7	11	14	6.5	13	3.2	2.1	1.9	3.2	
27	5.3	46	6.7	5.2	10	12	6.6	17	3.1	4.2	3.1	3.2	
28	5.3	42	6.7	5.0	8.7	10	7.0	560	3.4	2.9	20	3.0	
29	4.8	27	6.5	5.7	---	9.4	7.1	112	4.2	2.8	4.0	3.2	
30	5.0	23	6.3	5.4	---	8.6	6.7	50	5.0	2.8	3.0	3.7	
31	11	---	8.0	5.3	---	8.2	---	31	---	2.1	2.7	---	
TOTAL	239.6	524.7	356.4	186.9	808.5	1200.2	203.5	962.1	250.2	109.5	128.5	164.9	
MEAN	7.73	17.5	11.5	6.03	28.9	38.7	6.78	31.0	8.34	3.53	4.15	5.50	
MAX	19	82	53	7.4	196	206	7.8	560	22	6.4	20	24	
MIN	4.8	5.0	6.3	5.0	5.3	6.3	6.0	5.8	3.1	2.0	1.3	2.0	
CFSM	.44	1.00	.66	.34	1.65	2.21	.39	1.77	.48	.20	.24	.31	
IN.	.51	1.12	.76	.40	1.72	2.55	.43	2.05	.53	.23	.27	.35	
CAL YR 1985	TOTAL	6443.8		MEAN	17.7	MAX	150	MIN	4.4	CFSM	1.01	IN.	13.70
WTR YR 1986	TOTAL	5135.0		MEAN	14.1	MAX	560	MIN	1.3	CFSM	.81	IN.	10.92



## 03602500 PINEY RIVER AT VERNON, TN

LOCATION.--Lat 35°52'16", long 87°30'05", Hickman County, Hydrologic Unit 06040003, on right bank at county highway bridge, 40 ft upstream from Pretty Creek, 0.2 mi northwest of Vernon, 2.3 mi downstream from Mill Creek, 6.5 mi north of Centerville, and at mile 8.3.

DRAINAGE AREA.--193 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1925 to current year.

REVISED RECORDS.--WSP 758: 1927(M). WSP 823: Drainage area. WSP 1306: Drainage area at site used Feb. 9, 1931, to May 10, 1934. WSP 1436: 1926(M), 1927, 1929, 1930-31(M), 1932, 1934(M).

GAGE.--Water-stage recorder. Datum of gage is 461.72 ft above National Geodetic Vertical Datum of 1929. Prior to May 11, 1934, nonrecording gage; July 3, 1925, to Feb. 8, 1931, at site 350 ft upstream at datum 3.17 ft higher; Feb. 9, 1931, to May 10, 1934, at site 0.4 mi downstream at datum 0.40 ft higher. May 11, 1934, to Sept. 30, 1970, water-stage recorder at site 350 ft upstream; prior to June 29, 1965, at datum 3.17 ft higher, and 2.17 ft higher thereafter.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--61 years, 315 ft<sup>3</sup>/s, 22.17 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft<sup>3</sup>/s, Dec. 21, 1926, gage height, 16.5 ft, site and datum then in use; minimum, 35 ft<sup>3</sup>/s, Sept. 19, 20, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1897 reached a stage of 17.5 ft, original site and datum, discharge, 37,000 ft<sup>3</sup>/s, from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
June 9	2315	*3,630	*9.05				

Minimum discharge, 53 ft<sup>3</sup>/s, Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	183	204	392	104	89	201	203	138	121	99	79	63
2	143	235	411	101	104	189	193	134	115	99	74	69
3	117	200	338	100	688	180	185	129	117	96	75	102
4	108	187	294	97	447	169	176	128	137	96	71	144
5	100	160	253	95	357	163	169	130	139	92	70	123
6	96	141	223	93	378	159	161	125	132	91	73	105
7	94	133	202	92	601	149	197	122	199	90	80	93
8	91	125	187	89	448	143	242	122	422	88	83	88
9	89	116	171	88	361	142	255	121	838	87	76	87
10	90	104	161	89	315	141	243	116	1300	87	75	86
11	89	102	160	89	279	137	234	115	642	84	89	87
12	88	100	161	89	238	188	223	115	449	85	76	97
13	87	100	158	88	211	1220	214	113	335	85	71	86
14	88	98	151	86	284	812	202	110	275	82	69	82
15	97	98	147	86	523	686	190	107	232	83	68	80
16	95	121	145	86	504	526	174	107	203	95	145	79
17	91	127	143	86	700	436	165	106	183	85	147	78
18	93	125	136	91	1100	414	159	108	166	84	93	90
19	93	123	131	117	874	1210	155	140	156	82	79	119
20	95	114	131	108	671	823	161	121	146	80	74	100
21	95	112	126	104	538	613	181	110	137	78	70	93
22	91	114	125	100	443	503	162	105	129	74	68	97
23	100	112	125	95	381	437	155	106	126	73	67	93
24	122	108	121	94	341	383	151	140	156	71	67	86
25	107	110	114	94	301	340	151	144	126	71	67	81
26	103	118	113	92	276	308	146	133	114	74	65	81
27	99	276	113	87	255	280	143	138	108	112	63	81
28	96	793	110	87	224	256	141	138	104	90	59	79
29	95	572	107	90	---	239	138	138	108	83	57	74
30	95	428	106	88	---	226	135	128	103	81	57	72
31	101	---	108	87	---	214	---	121	---	78	56	---
TOTAL	3131	5456	5363	2892	11931	11887	5404	3808	7518	2655	2363	2695
MEAN	101	182	173	93.3	426	383	180	123	251	85.6	76.2	89.8
MAX	183	793	411	117	1100	1220	255	144	1300	112	147	144
MIN	87	98	106	86	89	137	135	105	103	71	56	63
CFSM	.52	.94	.90	.48	2.21	1.98	.93	.64	1.30	.44	.39	.47
IN.	.60	1.05	1.03	.56	2.30	2.29	1.04	.73	1.45	.51	.46	.52

CAL YR 1985	TOTAL	85056	MEAN	233	MAX	2320	MIN	72	CFSM	1.21	IN.	16.39
WTR YR 1986	TOTAL	65103	MEAN	178	MAX	1300	MIN	56	CFSM	.92	IN.	12.55

## TENNESSEE RIVER BASIN

## 03603000 DUCK RIVER ABOVE HURRICANE MILLS, TN

LOCATION.--Lat 35°55'48", long 87°44'35", Humphreys County, Hydrologic Unit 06040003, on left bank 0.4 mi downstream from Tumbling Creek, 1.3 mi upstream from bridge on State Highway 13, 3.6 mi southeast of Hurricane Mills, and at mile 26.0.

DRAINAGE AREA.--2,557 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1925 to current year. Prior to October 1951, published as "near Hurricane Mills."

REVISED RECORDS.--WSP 803: 1935. WSP 823: 1927(M). WSP 853: Drainage area. WSP 1436: 1926-28, 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 370.53 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 21, 1934, nonrecording gage and Feb. 21, 1934, to Sept. 30, 1951, water-stage recorder at bridge 5.6 mi downstream at datum 8.80 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since January 1976 by Normandy Lake (station 03596460). Prior to 1953 occasional regulation at low flow from small dams upstream. Minor diversions for irrigation. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--61 years, 4,085 ft<sup>3</sup>/s, 21.70 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 122,000 ft<sup>3</sup>/s, Feb. 14, 1948, gage height, 30.70 ft, from floodmark in gage house, present site and datum; minimum, 185 ft<sup>3</sup>/s, Sept. 11, 12, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,500 ft<sup>3</sup>/s, at 0830 hours Feb. 20, gage height, 14.65 ft; minimum, 494 ft<sup>3</sup>/s, Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1360	967	4710	1040	785	2270	1860	914	5130	748	623	835
2	1220	1590	4260	1050	800	2050	1750	907	3040	731	580	877
3	1070	2270	3810	1030	980	1890	1680	860	2300	726	562	830
4	1020	2190	3460	1050	1260	1760	1620	828	1920	774	542	922
5	1190	2120	3140	1130	1180	1650	1510	810	2060	778	527	857
6	1160	1950	2670	1140	1160	1570	1430	801	3360	730	520	806
7	996	1730	2310	1090	1350	1490	1440	794	3160	699	516	1640
8	845	1530	2050	1040	1720	1420	1780	781	3320	681	518	2980
9	750	1350	1880	1010	2390	1350	1940	779	3380	673	533	1650
10	707	1220	1750	974	2260	1300	1750	761	4210	653	610	1170
11	677	1140	1640	964	1990	1260	1670	771	3210	624	651	961
12	665	1060	1570	963	1750	1320	1660	775	2620	636	699	846
13	634	988	1540	950	1570	3330	1630	782	2430	640	735	796
14	598	935	1510	936	1580	10300	1500	767	2030	629	658	814
15	600	894	1510	924	2280	15000	1390	822	1740	670	594	732
16	595	951	1510	912	4060	13100	1300	853	1540	675	612	722
17	694	1010	1600	902	6660	9700	1230	848	1370	702	810	744
18	681	1170	1580	906	12700	7190	1190	835	1220	664	1120	714
19	670	1550	1520	970	19500	6580	1150	1060	1130	700	939	705
20	692	1880	1470	1000	19900	6660	1160	1220	1040	726	754	707
21	700	1840	1460	999	13000	7250	1160	1030	980	669	675	767
22	683	1590	1450	963	7480	6820	1160	889	930	645	637	1290
23	711	1370	1430	921	5520	5360	1130	823	902	595	600	1240
24	750	1250	1430	915	4400	4390	1080	857	900	557	570	977
25	811	1180	1400	931	3680	3600	1050	1020	879	533	557	827
26	858	1130	1360	903	3170	3130	1050	1000	815	518	550	758
27	846	1450	1320	875	2820	2780	1030	1100	775	635	529	697
28	802	3200	1290	829	2540	2510	1000	1200	748	918	514	645
29	775	5310	1190	793	---	2290	969	3480	769	790	501	626
30	752	4870	1080	794	---	2120	929	9240	773	816	798	602
31	762	---	1050	795	---	1990	---	9710	---	708	819	---
TOTAL	25274	51685	59950	29699	128485	133430	41198	47317	58681	21243	19853	28737
MEAN	815	1723	1934	958	4589	4304	1373	1526	1956	685	640	958
MAX	1360	5310	4710	1140	19900	15000	1940	9710	5130	918	1120	2980
MIN	595	894	1050	793	785	1260	929	761	748	518	501	602

CAL YR 1985	TOTAL	843796	MEAN	2312	MAX	20600	MIN	477	MEAN†	2313	CFSM†	.90	IN.†	12.28
WTR YR 1986	TOTAL	645552	MEAN	1769	MAX	19900	MIN	501	MEAN†	1806	CFSM†	.71	IN.†	9.59

† Adjusted for change in contents in Normandy Lake.

NOTE.--Contents (cfs-days) for adjustments furnished by Tennessee Valley Authority.

03604000 BUFFALO RIVER NEAR FLAT WOODS, TN  
(Hydrologic bench-mark station)

LOCATION.--Lat 35°29'45", long 87°49'58", Perry County, Hydrologic Unit 06040004, on right bank 0.4 mi downstream from Little Opossum Creek, 0.5 mi downstream from bridge on State Highway 13, 1.3 mi north of Flat Woods, 3.9 mi upstream from Sinking Creek, and at mile 58.7.

DRAINAGE AREA.--447 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1920 to current year.

REVISED RECORDS.--WSP 758: 1933. WSP 803: 1935. WSP 823: Drainage area. WSP 1436: 1921(M), 1922-24, 1925(M), 1927(M), 1934(M), WRD TN 1971: 1970.

GAGE.--Water-stage recorder. Datum of gage is 513.58 ft above National Geodetic Vertical Datum of 1929. Prior to May 27, 1934, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 9-13, 15 to Jan. 14. Records good.

AVERAGE DISCHARGE.--66 years, 752 ft<sup>3</sup>/s, 22.85 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,000 ft<sup>3</sup>/s, Feb. 13, 1948, gage height, 32.0 ft, from high-water mark in gage house, from rating curve extended above 50,000 ft<sup>3</sup>/s on basis of slope-area and contracted-opening measurements of peak flow and rainfall-runoff study; minimum, 65 ft<sup>3</sup>/s, Sept. 9, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, that of Feb. 13, 1948.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 29	0430	*8,220	*13.97	No other peak greater than base discharge.			

Minimum discharge, 113 ft<sup>3</sup>/s, Aug. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	494	390	676	325	259	440	389	245	1110	221	119	159	
2	510	618	803	340	256	409	372	261	879	226	116	171	
3	405	600	749	330	257	390	363	252	649	225	117	175	
4	348	583	641	325	260	373	355	238	545	206	121	174	
5	311	509	571	320	275	358	347	233	531	187	117	211	
6	287	452	520	310	286	347	334	232	484	178	114	215	
7	273	420	474	305	290	335	323	225	440	176	121	180	
8	264	392	443	300	288	322	341	219	427	176	138	157	
9	255	361	425	295	279	315	363	216	535	178	166	146	
10	254	344	425	295	279	309	325	214	536	182	184	142	
11	252	335	440	295	286	306	308	219	454	175	230	149	
12	249	325	455	295	277	389	305	227	400	166	192	308	
13	265	315	479	290	266	1490	316	233	366	168	166	372	
14	273	308	467	284	343	1560	305	231	327	180	152	258	
15	301	302	417	283	695	1180	299	219	301	232	146	197	
16	321	313	410	280	703	1510	287	211	283	296	152	174	
17	296	394	405	280	724	975	281	206	269	246	265	164	
18	279	536	395	285	2240	812	279	208	253	204	266	169	
19	271	541	380	324	2430	949	275	336	239	187	198	233	
20	272	475	370	344	1580	1230	278	386	232	174	169	260	
21	271	434	365	314	1180	955	290	297	225	164	155	261	
22	272	408	355	300	945	816	291	258	214	155	148	281	
23	300	390	350	282	791	726	279	246	207	147	145	257	
24	524	371	340	272	692	661	269	249	206	142	140	221	
25	502	355	335	271	615	599	262	373	197	137	138	190	
26	399	346	330	273	554	544	258	421	190	137	134	175	
27	353	396	325	272	516	507	252	575	184	156	132	175	
28	341	607	320	258	479	475	252	1920	185	142	156	170	
29	332	878	315	262	---	452	249	7240	193	133	222	162	
30	317	734	310	268	---	427	244	2400	212	128	209	156	
31	323	---	320	261	---	410	---	1420	---	123	166	---	
TOTAL	10114	13432	13610	9138	18045	20571	9091	20210	11273	5547	4994	6062	
MEAN	326	448	439	295	644	664	303	652	376	179	161	202	
MAX	524	878	803	344	2430	1560	389	7240	1110	296	266	372	
MIN	249	302	310	258	256	306	244	206	184	123	114	142	
CFSM	.73	1.00	.98	.66	1.44	1.49	.68	1.46	.84	.40	.36	.45	
IN.	.84	1.12	1.13	.76	1.50	1.71	.76	1.68	.94	.46	.42	.50	
CAL YR 1985	TOTAL	205688		MEAN	564	MAX	3930	MIN	205	CFSM	1.26	IN.	17.12
WTR YR 1986	TOTAL	142087		MEAN	389	MAX	7240	MIN	114	CFSM	.87	IN.	11.82



## TENNESSEE RIVER BASIN

03604000 BUFFALO RIVER NEAR FLAT WOODS, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1964 to January 1978.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 31.0°C, July 13-15, 1966; minimum, 0.0°C, many days during winter periods.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 17...	0930	291	93	7.50	18.0	764	1.7	8.5	89	K25
JAN 14...	1000	292	90	8.10	3.0	759	1.1	12.1	90	<1
APR 09...	0925	350	93	8.70	16.5	764	--	7.7	78	25
MAY 19...	1030	295	100	7.60	20.0	759	--	8.2	91	300
JUL 15...	0900	222	99	7.20	25.5	756	3.2	6.5	80	120

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3
OCT 17...	78	46	0	15	2.1	1.4	6	0.1	1.0	46
JAN 14...	K10	43	3	14	2.0	1.3	6	0.1	0.7	--
APR 09...	K6	--	--	--	--	--	--	--	--	46
MAY 19...	K460	--	--	--	--	--	--	--	--	52
JUL 15...	230	48	0	16	2.0	1.4	6	0.1	0.9	52

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
OCT 17...	2.8	3.8	2.3	<0.1	6.3	60	60	0.08	47	<0.01
JAN 14...	0.6	6.5	2.2	<0.1	2.5	53	53	0.07	42	<0.01
APR 09...	0.2	--	--	--	--	--	--	--	--	<0.01
MAY 19...	2.2	--	--	--	--	--	--	--	--	<0.01
JUL 15...	6.4	3.8	2.0	<0.1	6.5	54	64	0.07	32	<0.01

K--Results based on non-ideal colony count.



## TENNESSEE RIVER BASIN

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03604000 BUFFALO RIVER NEAR FLAT WOODS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 17...	<0.10	<0.01	<0.01	0.6	0.03	0.02	<0.01	5	3.9	92
JAN 14...	0.12	0.02	0.01	<0.2	<0.01	<0.01	0.01	8	6.3	79
APR 09...	0.27	0.03	0.04	0.3	0.03	0.01	<0.01	12	11	77
MAY 19...	0.37	0.08	0.09	0.6	0.05	0.02	0.03	18	14	81
JUL 15...	0.18	0.03	0.04	0.3	0.04	0.02	0.02	17	10	76

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 17...	30	<1	26	3	<1	3	<3	3	55	<1
JAN 14...	10	<1	18	<0.5	<1	<1	<3	<1	17	2

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 17...	<4	10	0.1	<10	1	<1	<1	57	<6	18
JAN 14...	<4	3	<0.1	<10	2	<1	<1	54	<6	10

DATE	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
OCT 17...	<0.4	<6.6	1.2	<0.7	1.1	<0.7	0.05	0.06

## TENNESSEE RIVER BASIN

03604500 BUFFALO RIVER NEAR LOBELVILLE, TN

LOCATION.--Lat 35°48'46", long 87°47'51", Perry County, Hydrologic Unit 06040004, on right bank 30 ft upstream from Standing Rock Bridge, 1.4 mi downstream from bridge on State Highway 13, 3.0 mi north of Lobelville, 13 mi downstream from Cane Creek, and at mile 17.7.

DRAINAGE AREA.--707 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for October 1927, published in WSP 1306.

REVISED RECORDS.--WSP 803: 1935. WSP 823: Drainage area. WSP 853: 1928-37. WSP 1436: 1932(M).

GAGE.--Water-stage recorder. Datum of gage 403.02 ft above National Geodetic Vertical Datum of 1929. Nov. 1, 1927, to May 31, 1934, nonrecording gage 40 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--59 years, 1,186 ft<sup>3</sup>/s, 22.78 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 100,000 ft<sup>3</sup>/s, Feb. 14, 1948, gage height, 23.76 ft, from high-water mark in gage house, from rating curve extended above 40,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 135 ft<sup>3</sup>/s, Aug. 18, 1953, caused by regulations upstream at unknown location; minimum discharge unaffected by regulation, 142 ft<sup>3</sup>/s, Oct. 1-8, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, that of Feb. 14, 1948. Flood of March 1902 reached a stage of about 21.8 ft, discharge not determined, from flood profile by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,200 ft<sup>3</sup>/s, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 30	1300	*6,830	*10.95	No other peak greater than base discharge.			
Minimum discharge, 207 ft <sup>3</sup> /s, Aug. 6.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	623	557	1230	528	444	781	650	411	1690	329	234	285	
2	693	633	1200	537	443	723	621	416	1370	344	227	274	
3	707	750	1190	538	441	676	598	408	1140	354	222	280	
4	623	865	1150	528	439	639	584	405	927	348	216	289	
5	549	835	1060	518	449	611	569	394	804	337	211	367	
6	504	777	979	510	476	589	552	386	747	323	214	353	
7	470	718	907	503	516	563	540	381	741	311	214	332	
8	447	668	845	494	509	544	541	375	734	305	249	310	
9	430	624	790	489	496	529	536	366	705	298	276	286	
10	419	588	744	484	493	517	537	358	779	295	274	267	
11	412	564	725	483	491	506	518	368	788	298	314	254	
12	407	547	773	484	482	546	499	372	708	294	323	269	
13	404	536	796	480	475	1680	490	365	625	294	311	304	
14	412	524	806	476	532	2360	492	363	569	303	292	391	
15	452	514	784	474	931	2070	487	363	526	340	274	379	
16	453	545	722	468	1130	1800	475	354	488	382	276	333	
17	465	576	682	468	1290	1770	464	345	458	380	372	305	
18	462	653	657	470	2170	1440	456	344	433	378	357	314	
19	450	762	651	511	3250	1580	449	410	418	348	374	346	
20	440	801	644	537	2930	1660	455	491	403	324	343	371	
21	437	747	617	541	2140	1680	463	519	383	308	310	371	
22	434	694	593	523	1700	1450	458	480	370	292	288	487	
23	457	655	582	503	1430	1280	452	440	361	280	273	465	
24	492	626	574	485	1250	1160	444	423	351	272	261	413	
25	586	604	566	473	1110	1070	433	472	345	262	252	373	
26	666	586	552	464	1010	981	425	502	337	259	245	340	
27	600	789	542	458	927	897	419	617	330	266	238	317	
28	547	1440	532	452	848	826	414	683	324	259	230	299	
29	519	1320	526	448	---	767	409	2210	329	263	224	291	
30	511	1330	518	446	---	724	403	6000	327	252	258	281	
31	514	---	519	448	---	682	---	2580	---	242	291	---	
TOTAL	15585	21828	23456	15221	28802	33101	14833	22601	18510	9540	8443	9946	
MEAN	503	728	757	491	1029	1068	494	729	617	308	272	332	
MAX	707	1440	1230	541	3250	2360	650	6000	1690	382	374	487	
MIN	404	514	518	446	439	506	403	344	324	242	211	254	
CFSM	.71	1.03	1.07	.69	1.46	1.51	.70	1.03	.87	.44	.38	.47	
IN.	.82	1.15	1.23	.80	1.52	1.74	.78	1.19	.97	.50	.44	.52	
CAL YR 1985	TOTAL	329222		MEAN	902	MAX	4640	MIN	372	CFSM	1.28	IN.	17.32
WTR YR 1986	TOTAL	221866		MEAN	608	MAX	6000	MIN	211	CFSM	.86	IN.	11.67

## 03605555 TRACE CREEK ABOVE DENVER, TN

LOCATION.--Lat 36°03'08", long 87°54'27", Humphreys County, Hydrologic Unit 06040005, on left bank at bridge on U.S. Highway 70, 1.0 mi east of Denver, 3.9 mi northeast of New Johnsonville, and at mile 4.2.

DRAINAGE AREA.--31.9 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1963 to current year. Published as "near Denver" prior to October 1972.

REVISED RECORDS.--WDR TN-76-1: 1973-75(P).

GAGE.--Water-stage recorder. Datum of gage is 377.05 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1973, at site 1.1 mi upstream. Oct. 22 to Nov. 6, 1963, at different datum and Nov. 7, 1963, to Dec. 31, 1972, at datum 12.47 ft higher.

REMARKS.--No estimated daily discharges. Records fair except for period Apr. 25 to Sept. 30, which are poor. Natural flow of stream effected by periodic transbasin diversion of water from the Duck River basin into the Trace Creek basin to supplement the Waverly municipal water supply. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--23 years, 51.5 ft<sup>3</sup>/s, 21.92 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft<sup>3</sup>/s, May 6, 1984, gage height, 13.61 ft; maximum discharge at prior site and datum, 3,640 ft<sup>3</sup>/s, May 13, 1967, gage height, 9.08 ft; minimum discharge, 3.0 ft<sup>3</sup>/s, Aug. 9, 13, 1969.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1886, 14 ft January 1937, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,850 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 2	2145	*2,380	*7.73	No other peak greater than base discharge.			

Minimum daily discharge, 5.6 fts<sup>3</sup>/s, July 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	25	78	67	12	13	25	16	18	15	13	6.8	6.9	
2	18	94	71	12	332	24	14	17	13	13	6.8	6.5	
3	16	57	53	12	359	23	14	16	22	9.9	6.7	7.3	
4	14	46	45	12	134	22	13	16	20	7.1	6.5	31	
5	13	39	40	12	90	21	13	16	23	7.1	6.1	17	
6	12	32	34	12	119	22	13	15	34	7.3	6.5	11	
7	12	27	29	11	118	20	23	14	37	7.3	8.0	8.6	
8	11	23	26	11	77	19	258	14	265	7.3	6.6	7.4	
9	11	21	23	11	60	19	89	13	251	6.6	6.9	6.8	
10	11	19	21	11	52	18	60	13	182	5.6	11	6.5	
11	11	18	30	11	45	17	50	13	95	6.5	9.7	6.9	
12	11	16	44	11	39	39	44	13	71	6.7	7.7	10	
13	11	15	40	11	35	211	40	13	54	9.2	7.1	7.6	
14	12	14	37	10	68	77	36	13	44	8.5	6.8	7.0	
15	27	14	32	10	99	56	32	12	40	11	6.7	6.6	
16	18	16	30	9.9	98	45	28	12	36	12	9.0	6.4	
17	15	16	27	9.9	119	39	26	12	24	10	11	6.3	
18	14	16	24	10	138	43	24	12	20	11	7.5	14	
19	15	15	22	10	92	502	22	15	18	11	6.9	35	
20	17	14	20	10	69	120	23	12	16	10	6.8	16	
21	20	13	19	10	56	74	22	12	15	8.6	6.7	20	
22	17	13	18	20	48	56	22	12	14	12	6.5	19	
23	45	12	17	19	42	47	20	12	14	13	6.4	13	
24	84	12	17	18	38	40	20	15	15	14	6.4	11	
25	46	12	16	17	34	34	19	20	13	12	6.3	9.5	
26	36	12	14	16	32	29	19	21	13	14	6.2	8.9	
27	29	113	14	15	30	26	18	19	13	26	6.2	8.7	
28	24	113	14	15	27	22	18	17	13	17	6.4	8.9	
29	21	87	13	15	---	20	18	16	12	16	6.3	10	
30	20	64	13	14	---	18	17	14	12	15	6.3	12	
31	20	---	13	13	---	16	---	14	---	11	6.4	---	
TOTAL	656	1041	883	390.8	2463	1744	1031	451	1414	338.7	221.2	345.8	
MEAN	21.2	34.7	28.5	12.6	88.0	56.3	34.4	14.5	47.1	10.9	7.14	11.5	
MAX	84	113	71	20	359	502	258	21	265	26	11	35	
MIN	11	12	13	9.9	13	16	13	12	12	5.6	6.1	6.3	
CFSM	.66	1.09	.89	.39	2.76	1.76	1.08	.45	1.48	.34	.22	.36	
IN.	.76	1.21	1.03	.46	2.87	2.03	1.20	.53	1.65	.39	.26	.40	
CAL YR 1985	TOTAL	11624.8		MEAN	31.8	MAX	311	MIN	7.9	CFSM	1.00	IN.	13.56
WTR YR 1986	TOTAL	10979.5		MEAN	30.1	MAX	502	MIN	5.6	CFSM	.94	IN.	12.80

## TENNESSEE RIVER BASIN

## 03606500 BIG SANDY RIVER AT BRUCETON, TN

LOCATION.--Lat 36°02'19", long 88°13'42", Carroll County, Hydrologic Unit 06040005, on right bank on downstream end of abutment of county bridge, 700 ft downstream from bridge on U.S. Highway 70, 0.6 mi upstream from Cherry Creek, 0.9 mi east of Bruceton, and at mile 31.6.

DRAINAGE AREA.--205 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1929 to current year.

REVISED RECORDS.--WSP 853: Drainage area. WSP 923: 1929-35.

GAGE.--Water-stage recorder. Datum of gage is 380.58 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 1, 1940, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--57 years, 292 ft<sup>3</sup>/s, 19.34 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,000 ft<sup>3</sup>/s, Jan. 21, 1935, gage height, 16.16 ft from graph based on gage readings, from rating curve extended above 9,200 ft<sup>3</sup>/s; minimum, 28 ft<sup>3</sup>/s, Aug. 17-19, 22, Sept. 1, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1897 reached a stage of 18 ft, discharge, 25,000 ft<sup>3</sup>/s, and flood in March 1919 reached a stage of 17 ft, discharge, 21,000 ft<sup>3</sup>/s, from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 19	0345	*1,290	*10.89				

Minimum discharge, 45 ft<sup>3</sup>/s, Aug. 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	259	353	327	122	107	113	111	108	85	59	51	50	
2	172	322	340	112	170	115	108	191	85	60	49	52	
3	126	213	258	117	289	113	109	116	85	60	49	56	
4	111	167	191	113	187	114	105	95	82	56	48	155	
5	102	138	169	112	181	114	157	88	212	54	47	66	
6	80	127	153	105	461	126	216	83	197	53	47	58	
7	78	124	139	107	479	115	169	79	239	52	49	54	
8	75	122	136	103	288	107	400	76	372	53	52	51	
9	73	116	129	99	189	109	405	73	722	51	51	50	
10	73	115	124	108	171	108	342	70	677	52	70	50	
11	73	114	257	108	166	106	179	76	468	51	71	51	
12	73	118	361	109	150	214	143	86	249	50	60	55	
13	73	116	276	109	137	611	131	79	144	55	52	53	
14	77	114	206	106	394	364	121	73	104	58	50	50	
15	100	131	164	107	575	208	116	70	91	72	49	50	
16	101	155	155	109	457	159	107	70	84	59	51	50	
17	88	171	147	113	326	137	107	67	79	54	55	50	
18	87	172	139	119	323	206	103	66	72	51	54	122	
19	90	145	124	226	266	1160	100	79	68	51	51	287	
20	139	143	123	178	196	874	124	77	66	55	49	167	
21	126	124	120	140	166	771	162	69	64	50	49	150	
22	105	118	122	124	147	288	124	66	63	49	51	250	
23	357	114	140	112	138	191	106	70	61	47	50	115	
24	736	114	137	109	135	166	101	135	62	47	46	82	
25	609	132	119	108	129	149	98	348	60	46	45	70	
26	385	139	107	109	125	139	96	500	58	46	45	67	
27	170	675	110	104	128	131	91	381	57	136	56	63	
28	131	734	118	100	120	125	88	180	57	104	52	61	
29	120	642	116	106	---	122	84	131	58	64	48	59	
30	121	389	110	110	---	119	81	111	59	56	47	58	
31	144	---	121	105	---	116	---	97	---	52	47	---	
TOTAL	5054	6357	5238	3609	6600	7490	4384	3810	4780	1803	1591	2552	
MEAN	163	212	169	116	236	242	146	123	159	58.2	51.3	85.1	
MAX	736	734	361	226	575	1160	405	500	722	136	71	287	
MIN	73	114	107	99	107	106	81	66	57	46	45	50	
CFSM	.80	1.03	.82	.57	1.15	1.18	.71	.60	.78	.28	.25	.42	
IN.	.92	1.15	.95	.65	1.20	1.36	.80	.69	.87	.33	.29	.46	
CAL YR 1985	TOTAL	73700		MEAN	202	MAX	884	MIN	65	CFSM	.99	IN.	13.37
WTR YR 1986	TOTAL	53268		MEAN	146	MAX	1160	MIN	45	CFSM	.71	IN.	9.67



## RESERVOIRS IN TENNESSEE RIVER BASIN

03468500 DOUGLAS LAKE.--Lat 35°57'40", long 83°32'20", Sevier County, Hydrologic Unit 06010107, at Douglas Dam on French Broad River, 6.5 mi north of Sevierville, and at mile 32.3. DRAINAGE AREA, 4,541 mi<sup>2</sup>. PERIOD OF RECORD, February 1943 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir formed by concrete main dam and 10 saddle dams. Spillway equipped with 11 radial gages, each 32 ft high by 40 ft wide and 8 sluice gates 10 ft high by 5.67 ft wide. Closure of dam was made Feb. 19, 1943; water in reservoir first reached minimum pool elevation Feb. 25, 1943. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,002.00 ft, top of gates, is 743,600 cfs-days, of which 631,200 cfs-days is controlled storage above elevation 940.00 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 760,000 cfs-days, July 25, 1949, elevation, 1,001.79 ft; minimum after first filling, 1,000 cfs-days, Jan. 16, 1956, elevation, 883.7 ft, estimated.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 334,000 cfs-days, June 16, elevation, 970.43 ft; minimum, 112,600 cfs-days, Jan. 29, elevation, 941.36 ft.

03476000 SOUTH HOLSTON LAKE.--Lat 36°31'15", long 82°05'11", Sullivan County, Hydrologic Unit 06010102, 470 ft upstream from South Holston Dam on South Fork Holston River, 7.0 mi southeast of Bristol, Virginia-Tennessee, and at mile 49.8. DRAINAGE AREA, 703 mi<sup>2</sup>. PERIOD OF RECORD, November 1950 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 11, 1951, non-recording gage at same site and datum.

REMARKS.--Reservoir is formed by rock and rolled earthfill dam. Spillway is uncontrolled morning-glory type, 128 ft in diameter with six piers, each 3 ft wide to guide flow spilling into a concrete-lined shaft and tunnel 34 ft in diameter. Closure of dam was made Nov. 20, 1950; water in reservoir first reached minimum pool elevation Jan. 25, 1951. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,742.00 ft, spillway crest, is 385,200 cfs-days, of which 220,800 cfs-days is controlled storage above elevation 1,675.00 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 363,800 cfs-days, May 10, 1984, elevation, 1,736.86 ft; minimum after first filling, 57,700 cfs-days, Jan. 13, 1956, elevation, 1,614.15 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 310,000 cfs-days, June 16, elevation, 1,723.19 ft; minimum, 212,500 cfs-days, Oct. 29, elevation, 1,693.13 ft.

03483500 WATAUGA LAKE.--Lat 36°19'20", long 82°07'16", Carter County, Hydrologic Unit 06010103, at Watauga Dam on Watauga River, 5 mi east of Elizabethton, and at mile 36.7. DRAINAGE AREA, 468 mi<sup>2</sup>. PERIOD OF RECORD, December 1948 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by rock and rolled earthfill dam. Spillway is uncontrolled morning-glory type, 128 ft in diameter with six piers, each 3 ft wide to guide flow spilling into a concrete-lined shaft and tunnel 34 ft in diameter. Closure of dam was made Dec. 1, 1948; water in reservoir first reached minimum pool elevation Dec. 31, 1948. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,975.00 ft, spillway crest, is 341,300 cfs-days, of which 178,500 cfs-days is controlled storage above elevation 1,915.00 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 293,300 cfs-days, Apr. 6, 1974, elevation, 1,961.07 ft; minimum after first filling, 25,100 cfs-days, Jan. 13, 1956, elevation, 1,813.47 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 245,200 cfs-days, June 16, elevation, 1,945.66 ft; minimum, 194,600 cfs-days, Oct. 24, elevation, 1,927.52 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
03468500 DOUGLAS LAKE				03476000 SOUTH HOLSTON LAKE			03483500 WATAUGA LAKE		
Sept. 30.....	957.14	223,000	-	1,698.56	228,400	-	1,929.47	199,700	-
Oct. 31.....	949.80	170,100	-52,900	1,693.16	212,600	-15,800	1,927.57	194,800	-4,900
Nov. 30.....	959.45	241,900	+71,800	1,699.25	230,500	+17,900	1,935.15	215,200	+20,400
Dec. 31.....	942.67	126,600	-115,300	1,697.17	224,300	-6,200	1,931.30	204,700	-10,500
CAL YR 1985	-	-	+1,500	-	-	+20,200	-	-	+15,900
Jan. 31.....	941.96	115,700	-10,900	1,693.93	214,800	-9,500	1,928.09	196,100	- 8,600
Feb. 28.....	954.41	194,100	+78,400	1,708.06	258,000	+43,200	1,934.33	213,000	+16,900
Mar. 31.....	962.78	261,800	+67,700	1,713.68	276,500	+18,500	1,939.50	227,500	+14,500
Apr. 30.....	965.35	285,100	+23,300	1,715.04	281,100	+4,600	1,941.81	234,800	+6,500
May 31.....	969.32	323,000	+37,900	1,721.66	304,400	+23,300	1,944.46	241,700	+7,700
June 30.....	967.17	302,200	-20,800	1,721.54	304,000	-400	1,944.35	241,400	-300
July 31.....	960.68	243,700	-58,500	1,715.73	283,500	-20,500	1,941.04	231,900	-9,500
Aug. 31.....	958.77	227,800	-15,900	1,710.37	265,500	-18,000	1,936.14	218,000	-13,900
Sept. 30.....	952.41	179,800	-48,000	1,709.52	262,700	-2,800	1,936.77	219,800	+1,800
WTR YR 1986	-	-	-43,200	-	-	+34,300	-	-	+20,100

## RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

03486800 BOONE LAKE.--Lat 36°26'26", long 82°26'16", Sullivan County, Hydrologic Unit 06010102, at Boone Dam on South Fork Holston River, 0.7 mi northeast of Spurgeon, 1.3 mi downstream from Watauga River, and at mile 18.6. DRAINAGE AREA, 1,840 mi<sup>2</sup>. PERIOD OF RECORD, December 1952 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by gravity nonover-flow type concrete dam. Spillway is equipped with five radial gates, each 35 ft high by 35 ft wide. Storage began Dec. 16, 1952; water in reservoir first reached minimum pool elevation Jan. 5, 1953. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,385.0 ft, top of gates, is 97,500 cfs-days, of which 74,800 cfs-days is controlled storage above elevation 1,330 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 99,100 cfs-days, May 19, 1964, elevation 1,384.99 ft; minimum after first filling, 21,300 cfs-days, Jan. 23, 1956, elevation, 1,327.06 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 94,200 cfs-days, Sept. 5, elevation, 1,383.48 ft; minimum, 49,300 cfs-days, Jan. 6, elevation, 1,356.74 ft.

03487000 FORT PATRICK HENRY LAKE.--Lat 36°29'53", long 82°30'32", Sullivan County, Hydrologic Unit 06010102, at Fort Patrick Henry Dam on South Fork Holston River, 0.2 mi upstream from bridge on U. S. Highway 23, 4.5 mi southeast of Kingsport, and at mile 8.2. DRAINAGE AREA, 1,903 mi<sup>2</sup>. PERIOD OF RECORD, October 1953 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by gravity nonover-flow type concrete dam. Spillway is equipped with five radial gates, each 35 ft high by 35 ft wide. Storage began Oct. 27, 1953; water in reservoir first reached minimum pool elevation Dec. 8, 1953. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,263 ft, top of gates, is 13,600 cfs-days, of which 2,200 cfs-days is controlled storage above elevation 1,258 ft, normal minimum pool. Reservoir is used for navigation, flood control and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 14,000 cfs-days, Feb. 11, 1954, elevation, 1,263.80 ft, minimum after first filling, 2,690 cfs-days, Sept. 19, 1986, elevation, 1,226.33 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 13,600 cfs-days, Dec. 27, elevation, 1,263.00 ft; minimum, 2,690 cfs-days, Sept. 19, elevation, 1,226.33 ft.

03493500 CHEROKEE LAKE.--Lat 36°10'00", long 83°29'55", Jefferson County, Hydrologic Unit 06010104, at Cherokee Dam on Holston River, 0.3 mi upstream from bridge on State Highway 92, 2.7 mi upstream from Mill Spring Creek, 2.8 mi north of Jefferson City, and at mile 52.3. DRAINAGE AREA, 3,429 mi<sup>2</sup>. PERIOD OF RECORD, December 1941 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with nine radial gates, each 32 ft high by 40 ft wide. Storage began Dec. 5, 1941; water in reservoir first reached minimum pool elevation Jan. 6, 1942. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,075.0 ft, top of gates, is 778,400 cfs-days, of which 580,300 cfs-days is controlled storage above elevation 1,020.0 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 779,400 cfs-days, May 11, 1944, maximum elevation, 1,074.47 ft May 30, 1973; minimum after first filling, 48,400 cfs-days, Jan. 7, 1954, elevation, 980.77 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 468,100 cfs-days, May 31, elevation, 1,051.51 ft; minimum, 222,300 cfs-days, Jan. 29, elevation, 1,023.78 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
	03486800 BOONE LAKE			03487000 FORT PATRICK HENRY LAKE			03493500 CHEROKEE LAKE		
Sept. 30.....	1,377.69	82,400	-	1,261.00	12,700	-	1,032.85	289,700	-
Oct. 31.....	1,372.38	72,800	-9,600	1,260.32	12,400	-300	1,030.98	274,800	-14,900
Nov. 30.....	1,368.99	67,000	-5,800	1,261.01	12,700	+300	1,038.18	334,800	+60,000
Dec. 31.....	1,358.30	51,600	-15,400	1,260.60	12,500	-200	1,029.33	262,000	-72,800
CAL YR 1985	-	-	+700	-	-	-400	-	-	+4,600
Jan. 31.....	1,359.14	52,500	+900	1,259.94	12,200	-300	1,024.19	225,100	-36,900
Feb. 28.....	1,366.12	62,500	+10,000	1,260.86	12,600	+400	1,039.70	348,100	+123,000
Mar. 31.....	1,372.23	72,400	+9,900	1,259.34	12,000	-600	1,043.37	382,900	+34,800
Apr. 30.....	1,372.58	73,000	+600	1,260.72	12,600	+600	1,036.34	412,700	+29,800
May 31.....	1,382.14	91,300	+18,300	1,260.80	12,600	0	1,050.51	457,000	+44,300
June 30.....	1,381.53	90,000	-1,300	1,259.52	12,000	-600	1,049.37	444,600	-12,400
July 31.....	1,381.53	90,000	0	1,260.75	12,600	+600	1,045.03	399,400	-45,200
Aug. 31.....	1,382.88	92,900	+2,900	1,259.87	12,200	-400	1,041.26	362,600	-36,800
Sept. 30.....	1,378.08	83,100	-9,800	1,226.96	2,800	-9,400	1,034.82	305,300	-57,300
WTR YR 1986	-	-	+700	-	-	-9,900	-	-	+15,600

## RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

03499500 FORT LOUDOUN LAKE.--Lat 35°47'30", long 84°14'35", Loudon County, Hydrologic Unit 06010201, at Fort Loudoun Dam on Tennessee River, 1 mi northeast of Lenoir City, and at mile 602.3. DRAINAGE AREA, 9,550 mi<sup>2</sup>. PERIOD OF RECORD, July 1943 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir formed by concrete dam with earth embankment. Spillway equipped with 14 radial gates, each 32 ft high by 40 ft wide. Closure of dam was made Aug. 2, 1943; water in reservoir first reached ordinary minimum pool elevation Sept. 4, 1943. Revised capacity table put into use Jan. 19, 1980. Total level pool capacity at elevation 815.00 ft, top of gates, is 424,000 cfs-days, of which 120,000 cfs-days is controlled flood storage above elevation 807.00 ft, minimum navigation pool. Reservoir is used for navigation, flood control, and power. Tellico-Fort Loudoun canal was opened Jan. 19, 1980. Canal is 1,000 ft long, and interconnects Tellico and Fort Loudoun Lakes at the dam. Spillway gates of Tellico Dam were closed Feb. 7, 1980, diverting all flow from Little Tennessee River.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 815.14 ft, May 8, 1984; minimum after first filling, 805.54 ft, Jan 18, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 813.25 ft Aug. 15; minimum elevation, 807.43 ft, Mar. 7. Contents based on backwater profile.

03518200 CHILHOWEE LAKE.--Lat 35°32'43", long 84°03'02", Monroe County, Hydrologic Unit 06010204, at Chilhowee Dam on Little Tennessee River, 2.4 mi southwest of Chilhowee, 2.6 mi upstream from Citico Creek, 10.1 mi downstream from Calderwood Dam, and at mile 33.6. DRAINAGE AREA, 1,977 mi<sup>2</sup>. PERIOD OF RECORD, August 1957 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete dam with rockfill end abutments. Spillway controlled by six radial gates, each 38 ft high by 35 ft wide. Closure of dam was made June 9, 1957; storage began Aug. 1, 1957; water in reservoir first reached minimum pool elevation Aug. 9, 1957. Total capacity at elevation 874.0 ft, top of gates, is 24,800 cfs-days, of which 3,400 cfs-days is controlled storage above elevation 870.0 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Gage-height record furnished by Aluminum Co. of America; level storage records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 25,400 cfs-days, May 28, 1973, elevation, 874.60 ft; minimum after first filling, 18,100 cfs-days, May 18, 1963, elevation, 865.94 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 24,800 cfs-days, Oct. 6, elevation, 873.93 ft; minimum, 21,400 cfs-days, Nov. 1, elevation, 869.96 ft.

03519800 TELlico LAKE.--Lat 35°46'53", long 84°15'10", Loudon County, Hydrologic Unit 06010201, at Tellico Dam on Little Tennessee River, 1.1 mi south of Lenoir City, and at mile 0.4. DRAINAGE AREA, 2,627 mi<sup>2</sup>. PERIOD OF RECORD, December 1979 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir formed by concrete dam with earth embankment. Spillway equipped with 3 radial gates, each 42 ft high by 40 ft wide. Closure of dam was made Nov. 29, 1979; water in reservoir first reached ordinary minimum pool elevation Dec. 24, 1979. Total capacity at elevation 815.00 ft, top of gates, is 225,500 cfs-days, of which 63,800 cfs-days is controlled storage above elevation 807.00 ft, minimum navigation pool. Reservoir is used for navigation, flood control, and indirectly, power. Tellico-Fort Loudoun canal was opened Jan. 19, 1980. Canal is 1,000 ft long, and interconnects Tellico and Fort Loudoun Lakes at the dam. Spillway gates of Tellico Dam were closed Feb. 7, 1980, diverting all flow from Little Tennessee River.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 228,700 cfs-days, May 8, 1984, elevation, 815.37 ft; minimum after first filling, 155,400 cfs-days, Jan. 11, 1985, elevation, 807.31 ft; minimum elevation, 806.96 ft, Jan. 14, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 199,600 cfs-days, Aug. 15, elevation, 813.25 ft; minimum, 156,400 cfs-days, Mar. 7, elevation, 807.45 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBE4 1985 TO SEPTEMBER 1986

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
	03499500	FORT LOUDOUN LAKE†		03518200	CHILHOWEE LAKE		03519800	TELLICO LAKE	
Sept. 30.....	812.88	182,000	-	873.00	24,000	-	812.88	196,700	-
Oct. 31.....	812.88	182,000	0	870.15	21,500	-2,500	812.94	209,000	+12,300
Nov. 30.....	809.55	159,000	-23,000	872.89	23,900	+2,400	809.65	182,000	-27,000
Dec. 31.....	808.31	151,000	-8,000	872.61	23,600	-300	808.39	172,000	-10,000
CAL YR 1985	-	-	+3,000	-	-	-900	-	-	+11,800
Jan. 31.....	808.04	148,800	-2,200	873.18	24,100	+500	808.12	161,100	-10,900
Feb. 28.....	807.77	147,300	-1,500	873.74	24,600	+500	807.88	159,400	-1,700
Mar. 31.....	807.96	148,400	+1,100	872.98	23,900	-700	808.04	160,500	+1,100
Apr. 30.....	809.31	157,300	+8,900	873.33	24,200	+300	809.38	170,200	+9,700
May 31.....	811.17	170,100	+12,800	873.15	24,100	-100	811.25	184,100	+13,900
June 30.....	812.25	177,700	+7,600	872.44	23,500	-600	812.34	192,500	+8,400
July 31.....	812.87	182,200	+4,500	872.25	23,300	-200	813.09	198,300	+5,800
Aug. 31.....	812.12	176,700	-5,500	873.06	24,000	+700	812.15	191,000	-7,300
Sept. 30.....	812.66	180,800	+4,100	872.42	23,400	-600	812.72	195,400	+4,400
WTR YR 1986	-	-	-1,200	-	-	-600	-	-	-1,300

† Contents based on backwater profile.



## TENNESSEE RIVER BASIN

## RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

03532500 NORRIS LAKE.--Lat 36°13'29", long 84°05'29", Anderson County, Hydrologic Unit 06010205, at Norris Dam on Clinch River, 2.5 mi northwest of Norris, and at mile 79.8. DRAINAGE AREA, 2,912 mi<sup>2</sup>. PERIOD OF RECORD, June 1935 to current year. GAGE, water-stage recorder. Datum of gage is 0.11 ft above National Geodetic Vertical Datum of 1929. Gage readings have been reduced to National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete gravity dam with three drum gates, each 100 ft wide by 14 ft high. Some storage began in June 1935; dam was completely closed and placed in operation Mar. 4, 1936; water in reservoir first reached minimum pool elevation Mar. 24, 1936. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,034.11 ft, top of gates, is 1,286,600 cfs-days, of which 969,000 cfs-days is controlled storage above elevation 960.11 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,236,700 cfs-days, Feb. 11, 1937, elevation, 1,031.21 ft; minimum after first filling, 75,500 cfs-days, Jan. 24, 1956, elevation, 909.46 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 743,000 cfs-days, May 30, elevation, 1,001.30 ft; minimum, 439,200 cfs-days, Jan. 31, elevation, 974.61 ft.

03535900 MELTON HILL LAKE.--Lat 35°53'04", 84°18'01", Loudon-Roane County line, Hydrologic Unit 06010207, 9 mi southwest of Oak Ridge, 19 mi west of Knoxville, 57 mi downstream from Norris Dam on Clinch River, and at mile 23.1. DRAINAGE AREA, 3,343 mi<sup>2</sup>. PERIOD OF RECORD, August 1962 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete gravity dam. Spillway is equipped with three radial gates, each 42 ft high by 40 ft wide. Dam completed and storage began May 1, 1963; water in reservoir first reached minimum pool elevation May 23, 1963. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 796 ft, top of gates, is 63,500 cfs-days, of which 16,100 cfs-days is controlled storage above elevation 790.0 ft, normal minimum pool. Reservoir is used for navigation, power, and recreation.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 64,900 cfs-days, Mar. 16, 1973, elevation, 796.45 ft; minimum after first filling, 35,100 cfs-days, Feb. 9, 1966, elevation, 784.10 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 60,800 cfs-days, Aug. 30, elevation, 795.10 ft; minimum, 47,700 cfs-days, Jan. 9, elevation, 790.10 ft.

03543000 WATTS BAR LAKE.--Lat 35°37'13", long 84°47'00", Rhea County, Hydrologic Unit 06010201, at Watts Bar Dam on Tennessee River, 6.5 mi southeast of Spring City, 72.4 mi downstream from Fort Loudoun Dam, and at mile 529.9. DRAINAGE AREA, 17,310 mi<sup>2</sup>, approximately. PERIOD OF RECORD, October 1941 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with 20 radial gates, each 32 ft high by 40 ft wide, also one 2-section leaf trashway gate 16.3 ft high by 24 ft wide. Storage began with partial closure Dec. 12, 1941, and final closure Jan. 1, 1942; water in reservoir first reached minimum navigation pool elevation Feb. 17, 1942. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 745.0 ft, top of gates, is 592,400 cfs-days, of which 191,000 cfs-days is controlled flood storage above elevation 735.0 ft, minimum navigation pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 745.40 ft, Mar. 17, 1973; minimum after first filling, 733.44 ft, Mar. 20, 1945.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 741.33 ft, Oct. 3; minimum midnight contents, 412,000 cfs-days, Mar. 14; minimum elevation, 735.27 ft, Mar. 7. Contents based on backwater profile.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
03532500 NORRIS LAKE				03535900 MELTON HILL LAKE			03543000 WATTS BAR LAKE†		
Sept. 30.....	981.99	510,900	-	794.03	57,700	-	741.02	510,000	-
Oct. 31.....	976.13	452,500	-58,400	794.17	58,100	+400	738.47	462,000	-48,000
Nov. 30.....	980.01	490,600	+38,100	793.88	57,300	-800	737.17	438,000	-24,000
Dec. 31.....	980.57	496,300	+5,700	793.91	57,400	+100	735.84	416,000	-22,000
CAL YR 1985	-	-	-100	-	-	+1,200	-	-	-3,000
Jan. 31.....	974.76	439,600	-56,700	793.91	57,400	0	736.25	422,600	+6,600
Feb. 28.....	993.45	640,400	+200,800	790.97	49,700	-7,700	735.85	415,900	-6,700
Mar. 31.....	998.84	708,700	+68,300	792.50	53,600	+3,900	735.74	413,900	-2,000
Apr. 30.....	999.63	719,100	+10,400	794.28	58,400	+4,800	736.77	431,600	+17,700
May 31.....	1,001.31	741,600	+22,500	794.26	58,400	0	738.73	466,400	+34,800
June 30.....	998.66	706,300	-35,300	794.14	58,000	-400	740.66	502,900	+36,500
July 31.....	993.18	637,100	-69,200	794.47	59,000	+1,000	740.54	500,600	-2,300
Aug. 31.....	989.05	588,200	-48,900	794.58	59,300	+300	741.08	510,900	+10,300
Sept. 30.....	983.58	527,600	-60,600	794.39	58,700	-600	740.94	508,100	-2,800
WTR YR 1986	-	-	+16,700	-	-	+1,000	-	-	-1,900

† Contents based on backwater profile.



## RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

03564000 LAKE OCOEE.--Lat 35°05'40", long 84°38'53", Polk County, Hydrologic Unit 06020003, at Lake Ocoee Dam on Ocoee River at Parksville, 13.8 mi east of Cleveland, and at mile 11.9. DRAINAGE AREA, 595 mi<sup>2</sup>. PERIOD OF RECORD, June 1914 to current year. Prior to October 1953, published as "Parksville (Ocoee No. 1) Reservoir," and October 1953 to September 1968, as "Parksville Lake." GAGE, nonrecording gage. Datum of gage is 6.89 ft above National Geodetic Vertical Datum of 1929. Gage readings have been reduced to National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete dam with 347 ft of spillway. Spillway is equipped with four floodgates, each 6 ft high by 20 ft wide and 265 ft of flashboards about 5.7 ft high. Crest of spillway under gates is at elevation 830.82 ft; remainder of spillway is 1.0 ft higher. Dam completed and storage began in 1911. Capacity of reservoir has been considerably reduced by silting. Revised capacity table put into use Jan. 1, 1979. Total capacity at elevation 837.55 ft, about top of flashboards, is 42,300 cfs-days, of which 15,600 cfs-days is controlled storage above elevation 817.9 ft, normal minimum pool. Reservoir is used for power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum midnight contents observed, 53,300 cfs-days, July 9, 1916; maximum midnight elevation observed, 840.2 ft, Feb. 10, 1946; minimum contents observed, 27,300 cfs-days, Jan. 27, 1956, elevation, 817.7 ft; minimum midnight elevation observed, 814.8 ft, Dec. 14, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 40,800 cfs-days, June 30, elevation, 829.5 ft; minimum contents observed, 32,200 cfs-days, Feb. 2, elevation, 819.7 ft.

03566500 CHICKAMAUGA LAKE.--Lat 35°06'07", long 85°13'42", Hamilton County, Hydrologic Unit 06020001, at Chickamauga Dam on Tennessee River, 5.8 mi northeast of Chattanooga, 58.9 mi downstream from Watts Bar Dam, and at mile 471.0. DRAINAGE AREA, 20,790 mi<sup>2</sup>, approximately. PERIOD OF RECORD, October 1939 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with eighteen 2-section lift gates, each 40.44 ft high by 40 ft wide. Storage began Feb. 6, 1940; water in reservoir first reached minimum navigation pool elevation Mar. 10, 1940. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 685.44 ft, top of gates, is 372,600 cfs-days, of which 175,000 cfs-days is controlled flood storage above elevation 675.0 ft, minimum navigation pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 686.10 ft, Mar. 18, 1973; minimum after first filling, 673.27 ft, Jan. 21, 1942.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 682.49 ft, June 27; minimum elevation, 675.10 ft, Mar. 6. Contents based on backwater profile.

03570520 NICKAJACK LAKE.--Lat 35°00'07", long 85°37'14", Marion County, Hydrologic Unit 06020001, at Nickajack Dam on Tennessee River, 2 mi upstream from Sequatchie River, 5 mi south of Jasper, 46.3 mi downstream from Chickamauga Dam, and at mile 424.7. DRAINAGE AREA, 21,870 mi<sup>2</sup>, approximately. PERIOD OF RECORD, December 1967 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete dam with earth embankments on each side. The spillway, with crest at elevation 595.0 ft, is equipped with 10 radial gates, each 40 ft high by 40 ft wide. A trash gate, 5.5 ft high by 15 ft wide, is located between the spillway and powerhouse. Dam was completed and storage began on Dec. 14, 1967. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 635.0 ft, top of gates, is 127,200 cfs-days, of which 16,200 cfs-days is controlled storage above elevation 632.0 ft, ordinary minimum. Reservoir is used for navigation and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 634.99 ft, Apr. 19, 1969; minimum after first filling, 630.82 ft, Feb. 20, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum midnight contents, 127,000 cfs-days, Feb. 18; maximum elevation, 634.25 ft, Feb. 14; minimum elevation, 632.32 ft, Sept. 11. Contents based on backwater profile.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
	03564000	LAKE OCOEE		03566500	CHICKAMAUGA LAKE†		03570520	NICKAJACK LAKE†	
Sept. 30.....	835.6	40,500	-	681.01	289,000	-	633.40	120,000	-
Oct. 31.....	835.3	40,200	-300	678.52	247,000	-42,000	633.70	122,000	+2,000
Nov. 30.....	832.7	37,900	-2,300	676.14	215,000	-32,000	633.26	122,000	0
Dec. 31.....	829.3	34,900	-3,000	676.05	212,000	-3,000	632.90	118,000	-4,000
CAL YR 1985	-	-	+1,400	-	-	-2,000	-	-	0
Jan. 31.....	827.3	32,700	-2,200	676.40	216,600	+4,600	633.98	122,700	+4,700
Feb. 28.....	828.7	33,800	+1,100	675.55	209,400	-7,200	633.49	122,000	-700
Mar. 31.....	829.9	34,800	+1,000	675.74	207,600	-1,800	633.50	120,600	-1,400
Apr. 30.....	834.2	38,600	+3,800	678.03	239,400	+31,800	633.55	120,900	+300
May 31.....	835.3	39,700	+1,100	680.49	280,000	+40,600	633.35	119,800	-1,100
June 30.....	836.1	40,500	+800	681.80	303,900	+23,900	633.66	121,400	+1,600
July 31.....	834.6	39,000	-1,500	682.82	304,200	+300	633.14	118,700	-2,700
Aug. 31.....	834.9	39,300	+300	680.36	277,600	-26,600	633.88	122,300	+3,600
Sept. 30.....	834.7	39,100	-200	680.88	286,700	+9,100	633.33	119,700	-2,600
WTR YR 1986	-	-	-1,400	-	-	-2,300	-	-	-300

† Contents based on backwater profile.

## TENNESSEE RIVER BASIN

## RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

- 03579000 WOODS RESERVOIR.--Lat 35°17'54", long 86°05'48", Franklin County, Hydrologic Unit 06030003, at Elk River Dam on Elk River, 1.2 mi upstream from Spring Creek, 2.5 mi northeast of Estill Springs, 6.8 mi upstream from bridge on U.S. Highway 41-A, and at mile 170.0. DRAINAGE AREA, 263 mi<sup>2</sup>. PERIOD OF RECORD, May 1952 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
- REMARKS.--Reservoir is formed by concrete gravity and earthfill-type dam with riprapped embankments. Spillway equipped with three radial gates, each 25 ft high by 50 ft wide, and two sluice gates, each 6 ft high by 4 ft wide. Closure of dam was made May 1, 1952; water in reservoir first reached minimum pool elevation Feb. 6, 1953. Total capacity at elevation 962.0 ft, surcharge pool, is 44,400 cfs-days, of which 9,900 cfs-days is controlled storage above elevation 957.0 ft, normal minimum pool. Reservoir is used for cooling water, flood control, and recreational purposes.
- COOPERATION.--Twice-daily gage readings (0600 and 2400 hours) furnished by U.S. Air Force.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 42,300 cfs-days, April 21 and 22, 1956, elevation, 960.98 ft; minimum after first filling, 26,300 cfs-days, Nov. 8-11, 1953, elevation, 951.93 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum midnight contents, 39,900 cfs-days, June 11, elevation, 959.84 ft; minimum contents, 35,840 cfs-days, Oct. 9, 11, elevation, 957.70 ft.
- 03580740 TIMS FORD LAKE.--Lat 35°11'51", long 86°16'41", Franklin County, Hydrologic Unit 06030003, in intake tower near left bank at Tims Ford Dam on Elk River, 0.4 mi upstream from bridge on State Highway 50, 9.5 mi west of Winchester, and at mile 133.4. DRAINAGE AREA, 529 mi<sup>2</sup>. PERIOD OF RECORD, December 1970 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
- REMARKS.--Reservoir is formed by concrete dam with compacted rockfill impervious earth core embankments. Spillway equipped with three radial gates, each 42 ft high by 40 ft wide. Storage began Dec. 1, 1970; water in reservoir first reached minimum pool elevation Feb. 23, 1971, and first filling was completed June 3, 1971. Total capacity at elevation 895 ft, top of gates, is 306,500 cfs-days, of which 142,400 cfs-days is controlled storage above elevation 865 ft, normal minimum pool. Reservoir is used for flood control, power, and recreation.
- COOPERATION.--Records furnished by Tennessee Valley Authority.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 296,300 cfs-days, Mar. 17, 1973, elevation, 893.24 ft; minimum after first filling 154,000 cfs-days, Oct. 15, 1972, elevation, 862.24 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 246,600 cfs-days, Oct. 4, elevation, 884.05 ft; minimum, 189,100 cfs-days, Feb. 4, elevation, 871.38 ft.
- 03593000 PICKWICK LAKE.--Lat 35°04'16", long 88°15'04", Hardin County, Hydrologic Unit 06040001, at Pickwick Landing Dam on Tennessee River, 1.5 mi north of town of Pickwick Dam, 6.1 mi upstream from Lick Creek, 52.7 mi downstream from Wilson Dam, and at mile 206.7. DRAINAGE AREA, 38,820 mi<sup>2</sup>, approximately. PERIOD OF RECORD, October 1937 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
- REMARKS.--Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with twenty-two 2-section lift gates, each 40 ft high by 40 ft wide, one of which is used as a trash gate. Dam completed and storage began Feb. 8, 1938; water in reservoir first reached minimum pool elevation Feb. 18, 1938. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 418.0 ft, top of gates, is 557,100 cfs-days, of which 210,200 cfs-days is controlled flood storage above elevation 408.0 ft, minimum navigation pool. Reservoir is used for navigation, flood control, and power.
- COOPERATION.--Records furnished by Tennessee Valley Authority.
- EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 419.49 ft, Mar. 30, 1944; minimum after first filling, 407.12 ft, Dec. 18, 1944.
- EXTREMES FOR CURRENT YEAR.--Maximum elevation, 415.16 ft, June 11; minimum elevation, 408.08 ft, Dec. 5. Contents based on backwater profile.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
	03579000 WOODS RESERVOIR			03580740 TIMS FORD LAKE			03593000 PICKWICK LAKE†		
Sept. 30.....	958.57	37,500	-	882.91	241,000	-	410.94	490,000	-
Oct. 31.....	957.88	36,200	-1,300	882.71	240,000	-1,000	410.43	394,000	-96,000
Nov. 30.....	957.97	36,300	+100	880.50	229,300	-10,700	409.93	383,000	-11,000
Dec. 31.....	958.01	36,400	+100	873.60	198,400	-30,900	408.86	364,000	-19,000
CAL YR 1985	-	-	+100	-	-	-4,000	-	-	-88,000
Jan. 31.....	957.97	36,300	-100	871.50	189,600	+8,800	409.41	374,000	+10,000
Feb. 28.....	957.95	36,300	0	877.39	214,900	+25,300	408.97	368,400	-5,600
Mar. 31.....	957.99	36,400	+100	880.71	230,200	+15,300	410.90	402,000	+33,600
Apr. 30.....	958.77	37,900	+1,500	880.88	231,000	+800	411.00	403,700	+1,700
May 31.....	959.44	39,200	+1,300	881.74	235,200	+4,200	413.75	461,200	+57,500
June 30.....	959.44	39,200	0	883.52	244,000	+8,800	414.00	465,800	+4,600
July 31.....	959.31	38,900	-300	882.83	240,500	-3,500	412.75	440,000	-25,800
Aug. 31.....	959.09	38,500	-400	882.74	240,100	-400	412.04	424,800	-15,200
Sept. 30.....	959.48	39,200	+700	883.52	244,000	+3,900	410.88	401,600	-23,200
WTR YR 1986	-	-	+1,700	-	-	+20,600	-	-	-88,400

† Contents based on backwater profile.

## RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

03596460 NORMANDY LAKE.--Lat 35°27'55", long 86°14'48", Coffee County, Hydrologic Unit 06040002, at Normandy Dam on Duck River, 1.5 mi northeast of Normandy, 2.6 mi downstream from Riley Creek, 8 mi north of Tullahoma, and at mile 248.6. DRAINAGE AREA, 195 mi<sup>2</sup>. PERIOD OF RECORD, January 1976 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete gravity dam with riprapped and rolled earthfill embankment on left side. Spillway is equipped with two radial gates, each 40 ft high by 36 ft wide. Storage began Jan. 5, 1976; water in reservoir first reached minimum pool elevation Mar. 22, 1976. Revised capacity table put into use Jan. 1, 1977. Total capacity at elevation 880 ft, top of gates, is 64,000 cfs-days, of which 30,400 cfs-days is controlled storage above elevation 859 ft, normal minimum pool. Reservoir is used for flood control, water supply, water quality control, recreation, and shoreline development.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 63,500 cfs-days, May 19, 1983, elevation, 879.70 ft; minimum after first filling, 26,800 cfs-days, Nov. 27, 1981, elevation, 853.12 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 57,300 cfs-days, July 2, elevation, 876.23 ft; minimum, 32,300 cfs-days, Jan. 17, elevation, 858.35 ft.

03609000 KENTUCKY LAKE.--Lat. 37°00'49", long 88°16'06", Marshall County, KY, Hydrologic Unit 06040006, at Kentucky Dam on Tennessee River at Gilbertsville, KY, and at mile 22.4. DRAINAGE AREA, 40,200 mi<sup>2</sup>, approximately. PERIOD OF RECORD, July 1944 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete dam with 24 lift gates 50 ft high by 40 ft wide. Storage began Aug. 16, 1944, and final closure was Aug. 30, 1944. Water in reservoir reached minimum pool elevation Apr. 7, 1945. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 375.0 ft, top of gates, is 3,090,000 cfs-days, of which 2,020,700 cfs-days is controlled storage above 354.0 ft, ordinary minimum pool. Reservoir is used for navigation, flood control, and power. Barkley-Kentucky Canal opened July 13, 1966, for navigation and power use. Canal is 1.75 miles long and interconnects Lake Barkley and Kentucky Lake at a point 2.2 mi upstream from Barkley Dam. For daily discharges through the canal, see Kentucky reports.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 369.87 ft, May 24, 1983; minimum after first filling, 348.02 ft, Mar. 11, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 360.02 ft, June 9; minimum elevation, 353.73 ft, Jan. 26.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Date	Elevation (feet)	Change in Contents (cfs-days)	contents (cfs-days)	Elevation (feet)	Change in Contents (cfs-days)	contents (cfs-days)
	03596460 NORMANDY LAKE				03609000 KENTUCKY LAKE†	
Sept. 30.....	863.91	39,200	-	355.08	1,152,000	-
Oct. 31.....	862.37	37,700	-1,500	355.21	1,145,000	-7,000
Nov. 30.....	861.72	36,900	-800	354.85	1,132,000	-13,000
Dec. 31.....	858.96	33,500	-3,400	354.35	1,089,000	-43,000
CAL YR 1985	-	-	+400	-	-	-51,000
Jan. 31.....	858.67	32,700	-800	354.58	1,088,500	-500
Feb. 28.....	866.76	43,100	+10,400	354.53	1,110,200	+21,700
Mar. 31.....	871.80	50,400	+7,300	355.23	1,134,100	+23,900
Apr. 30.....	872.91	52,100	+1,700	358.37	1,362,100	+228,000
May 31.....	874.50	54,500	+2,400	359.41	1,455,000	+92,900
June 30.....	876.18	57,200	+2,700	359.04	1,417,900	-37,100
July 31.....	874.24	54,100	-3,100	357.63	1,328,900	-89,000
Aug. 31.....	872.23	51,000	-3,100	356.50	1,229,800	-99,100
Sept. 30.....	873.43	52,900	+1,900	355.47	1,153,400	-76,400
WTR YR 1986	-	-	+13,700	-	-	+1,400

OTHER RESERVOIRS.--The following small reservoirs in the Tennessee River basin are described below, but records of contents are not published herein.

03466400 DAVY CROCKETT LAKE on Nolichucky River at Nolichucky Dam, with a total capacity of 1,300 cfs-days, none of which is controlled storage.

03517900 CALDERWOOD LAKE on Little Tennessee River at Calderwood, with a total capacity of 20,800 cfs-days of which 840 cfs-days is controlled storage.

03562500 OCOEE NO. 3 LAKE on Ocoee River at Ocoee No. 3 Dam, 5.0 miles west of Ducktown, with a total capacity of 1,660 cfs-days, of which 1,550 cfs-days is controlled storage. Records of contents previous to 1971 water year published as Ocoee No. 3 Lake near Ducktown, TN.

† Contents based on backwater profile.



## OBION RIVER BASIN

07024300 BEAVER CREEK AT HUNTINGDON, TN

LOCATION.--Lat 35°59'56", long 88°26'01", Carroll County, Hydrologic Unit 08010203, on left bank on downstream end of bridge pier on U.S. Highway 70, 0.3 mi southwest of Huntingdon, 0.6 mi downstream from Brier Creek, and at mile 5.6.

DRAINAGE AREA.--55.5 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1946, 1948, 1952-54, 1958-61 and annual maximum, water years 1954-62. October 1962 to current year.

REVISED RECORDS.--WSP 1920: 1956(M).

GAGE.--Water-stage recorder. Datum of gage is 364.20 ft above National Geodetic Vertical Datum of 1929 (Tennessee State Highway Department bench mark). Dec. 21, 1945, to Oct. 3, 1962, nonrecording gage at site 30 ft downstream at same datum; Jan. 6, 1954, to Oct. 3, 1962, crest-stage gage at same site at datum 1.17 ft higher.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--24 years, 113 ft<sup>3</sup>/s, 27.65 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,350 ft<sup>3</sup>/s, Sept. 9, 1970 from rating curve extended above 3,600 ft<sup>3</sup>/s, on basis of contracted opening measurement of peak flow; maximum gage height, 15.20 ft, Sept. 13, 1982; minimum discharge, 19 ft<sup>3</sup>/s, May 17, 1965, part of each day Aug. 23-31, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
June 10	1000	*1,120	*10.26				

Minimum discharge, 19 ft<sup>3</sup>/s, part of each day Aug. 23-31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	66	66	148	44	37	38	36	56	34	23	23	20	
2	37	58	104	43	93	39	36	51	34	26	22	22	
3	32	43	63	44	193	38	36	37	34	23	22	29	
4	31	39	56	43	109	37	34	34	43	22	22	116	
5	29	37	52	40	86	37	65	33	145	22	21	56	
6	29	36	48	38	262	47	57	32	85	22	21	29	
7	30	34	45	39	224	39	60	31	109	21	22	26	
8	30	31	46	36	78	36	295	30	136	21	22	23	
9	38	31	45	36	56	36	194	29	456	21	24	22	
10	39	32	43	38	51	37	82	28	957	21	29	22	
11	32	35	152	38	49	36	65	31	395	21	27	24	
12	31	43	181	39	44	134	57	31	123	22	21	29	
13	32	40	117	38	40	283	53	29	60	27	20	24	
14	34	40	78	43	207	111	52	27	45	25	20	23	
15	50	38	60	44	354	71	48	27	40	32	20	23	
16	40	70	58	37	203	57	45	27	36	23	21	22	
17	37	56	56	38	152	49	45	27	33	21	24	44	
18	36	50	50	43	110	113	43	28	31	21	22	258	
19	41	45	42	77	81	452	42	29	28	21	21	302	
20	56	43	44	50	65	247	67	27	27	21	20	103	
21	80	39	41	44	57	96	71	26	26	22	20	51	
22	49	38	44	40	52	63	51	26	25	22	20	46	
23	94	36	51	37	49	56	45	28	25	22	20	39	
24	103	37	48	36	48	52	44	131	30	22	19	41	
25	55	43	39	38	45	48	40	241	26	22	19	40	
26	41	51	36	36	45	45	37	105	24	29	19	30	
27	36	343	40	33	45	43	34	71	24	130	20	27	
28	37	309	41	31	40	41	34	50	24	34	19	27	
29	35	126	40	37	---	40	31	44	24	27	19	26	
30	36	72	39	36	---	38	30	38	24	25	19	25	
31	44	---	44	36	---	37	---	36	---	24	20	---	
TOTAL	1360	1961	1951	1252	2875	2496	1829	1440	3103	835	658	1569	
MEAN	43.9	65.4	62.9	40.4	103	80.5	61.0	46.5	103	26.9	21.2	52.3	
MAX	103	343	181	77	354	452	295	241	957	130	29	302	
MIN	29	31	36	31	37	36	30	26	24	21	19	20	
CFSM	.79	1.18	1.13	.73	1.86	1.45	1.10	.84	1.86	.48	.38	.94	
IN.	.91	1.31	1.31	.84	1.93	1.67	1.23	.97	2.08	.56	.44	1.05	
CAL YR 1985	TOTAL	25467		MEAN	69.8	MAX	1060	MIN	21	CFSM	1.26	IN.	17.07
WTR YR 1986	TOTAL	21329		MEAN	58.4	MAX	957	MIN	19	CFSM	1.05	IN.	14.30



## OBION RIVER BASIN

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07024300 BEAVER CREEK AT HUNTINGDON, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961, 1963-65, 1979-82, 1986.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 03...	1150	32	62	14.0	10	0.86
NOV 12...	1025	39	59	17.0	17	1.8
JAN 03...	1130	43	55	6.0	13	1.5
FEB 14...	1050	123	112	2.5	275	91
MAR 26...	0910	45	70	13.5	24	2.9
MAY 08...	1000	30	52	18.5	39	3.2
JUN 18...	1615	30	55	20.5	40	3.2
JUL 31...	1200	25	55	24.0	39	2.6
SEP 12...	1130	30	55	20.0	50	4.1

## OBION RIVER BASIN

07024500 SOUTH FORK OBION RIVER NEAR GREENFIELD, TN

LOCATION.--Lat 36°07'05", long 88°48'39", Weakley County, Hydrologic Unit 08010203, on left bank 75 ft downstream from bridge on U.S. Highway 45E, 1.1 mi downstream from Mosley Branch, 2.5 mi south of Greenfield, and 9.7 mi upstream from confluence with Middle Fork.

DRAINAGE AREA.--383 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1929 to current year.

REVISED RECORDS.--WSP 1311: 1936(M). WSP 1920: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 300.36 ft above National Geodetic Vertical Datum of 1929. Prior to June 22, 1939, recording gage at site 75 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Aug. 7 to Sept. 15. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--57 years, 587 ft<sup>3</sup>/s, 20.81 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,600 ft<sup>3</sup>/s, Jan. 22, 1937, gage height, 17.82 ft, from floodmarks, from rating curve extended above 14,000 ft<sup>3</sup>/s; minimum, 61 ft<sup>3</sup>/s, Aug. 21, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 8	0700	3,330	12.94	June 5	1300	*4,210	*14.01

Minimum daily discharge, 100 ft<sup>3</sup>/s, Sept. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	234	231	913	201	211	240	225	179	198	128	157	104	
2	221	224	607	199	922	234	222	183	213	128	144	102	
3	213	223	501	200	1630	227	219	180	180	123	135	101	
4	202	237	453	199	1230	220	211	173	679	118	128	100	
5	191	232	388	196	1360	216	205	175	2190	118	128	100	
6	184	221	325	194	1650	215	208	161	1780	118	127	106	
7	169	210	286	192	1180	212	240	155	1610	117	127	126	
8	157	198	264	186	1040	208	1940	150	1120	116	126	122	
9	148	194	250	183	904	207	751	145	1360	116	125	119	
10	144	193	241	182	678	207	573	143	1440	116	124	115	
11	142	199	861	182	524	203	449	148	1700	115	124	112	
12	142	200	621	182	426	1230	354	143	1700	115	122	109	
13	142	199	686	182	381	1170	296	140	1750	121	121	105	
14	148	195	692	181	902	928	270	137	1490	117	120	102	
15	145	201	551	180	1040	921	244	134	786	116	119	118	
16	146	297	434	181	1220	692	224	131	434	116	130	132	
17	149	232	357	186	1210	498	208	130	314	116	127	134	
18	154	250	305	207	984	401	199	133	261	116	125	188	
19	163	242	280	289	790	427	193	136	229	116	124	240	
20	180	244	278	255	615	842	240	131	205	116	123	281	
21	182	233	277	267	474	1010	229	128	199	116	121	359	
22	188	222	264	275	385	797	224	127	168	115	120	362	
23	296	212	231	262	333	524	223	127	160	115	118	317	
24	274	205	228	247	318	396	219	346	187	114	117	267	
25	300	204	219	235	288	333	213	411	154	114	116	237	
26	325	254	217	222	271	303	204	563	143	120	114	212	
27	337	813	214	201	262	283	191	495	144	466	112	193	
28	301	597	207	195	250	260	191	469	142	189	111	177	
29	263	723	203	195	---	248	174	384	135	183	109	164	
30	237	764	199	198	---	239	165	293	130	180	107	151	
31	227	---	202	194	---	230	---	234	---	172	105	---	
TOTAL	6304	8649	11754	6448	21478	14121	9504	6584	21201	4246	3806	5055	
MEAN	203	288	379	208	767	456	317	212	707	137	123	169	
MAX	337	813	913	289	1650	1230	1940	563	2190	466	157	362	
MIN	142	193	199	180	211	203	165	127	130	114	105	100	
CFSM	.53	.75	.99	.54	2.00	1.19	.83	.55	1.85	.36	.32	.44	
IN.	.61	.84	1.14	.63	2.09	1.37	.92	.64	2.06	.41	.37	.49	
CAL YR 1985	TOTAL	135646		MEAN	372	MAX	2260	MIN	136	CFSM	.97	IN.	13.18
WTR YR 1986	TOTAL	119150		MEAN	326	MAX	2190	MIN	100	CFSM	.85	IN.	11.57

## OBION RIVER BASIN

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07024500 SOUTH FORK OBION RIVER NEAR GREENFIELD, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1979-82, 1986.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT						
03...	1725	209	54	16.0	39	22
NOV						
13...	1345	198	56	19.5	39	21
JAN						
03...	1515	198	53	6.5	16	8.6
FEB						
14...	1540	1540	60	1.0	1140	4740
MAR						
26...	1200	290	80	12.5	56	44
MAY						
08...	1415	148	55	24.0	35	14
JUN						
03...	1730	171	--	25.0	148	68
06...	1835	1550	130	23.0	386	1620
JUL						
02...	1210	127	75	25.0	--	--
AUG						
01...	1100	153	90	28.0	66	27

## OBION RIVER BASIN

07026000 OBION RIVER AT OBION, TN  
(National stream-quality accounting network station)

LOCATION.--Lat 36°15'04", long 89°11'33", Obion County, Hydrologic Unit 08010202, near left bank on downstream end of bridge pier on old U.S. Highway 51, 0.5 mi upstream from Richland Creek, 0.6 mi south of Obion, 14.5 mi downstream from North Fork, and at mile 62.4.

DRAINAGE AREA.--1,852 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1929 to September 1958, October 1966 to current year. Gage height and discharge records at this site from 1964 to 1975 are in reports of U.S. Army Corps of Engineers.

REVISED RECORD.--WSP 1211: 1930, 1943. WSP 2120: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 246.48 ft above National Geodetic Vertical Datum Of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1932, nonrecording gage at present site at datum 5.00 ft higher; Oct. 1, 1932, to Aug. 2, 1939, nonrecording gage, and Aug. 3, 1939, to Sept. 1958, water-stage recorder at present site at datum 15.00 ft higher.

REMARKS.--No estimated daily discharges. Records fair.

COOPERATION.--Twenty three discharge measurements furnished by the U.S. Army Corps of Engineers.

AVERAGE DISCHARGE.--49 years, (water years 1930-58, 1967-86), 2712 ft<sup>3</sup>/s, 19.89 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 99,500 ft<sup>3</sup>/s, Jan. 24, 1937, gage height, 40.4 ft present datum; minimum, under conditions of no backwater, 230 ft<sup>3</sup>/s, Oct. 7-9, 1943; minimum daily discharge, 15 ft<sup>3</sup>/s, backwater from Mississippi River, Feb. 4, 1937; reverse flow of 57 ft<sup>3</sup>/s measured by current meter on that date.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,300 ft<sup>3</sup>/s, Feb. 4, gage height, 31.65 ft; minimum discharge, 471 ft<sup>3</sup>/s, July 25, 26, Aug. 29, 30, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	2090	2370	4500	811	746	1040	888	847	745	545	634	488	
2	1230	2230	6560	807	4460	1060	866	965	1850	545	592	511	
3	949	1520	2850	827	16000	1020	856	899	3070	550	560	517	
4	834	1190	1780	841	17800	992	831	813	2680	528	542	563	
5	763	1060	1510	850	18000	980	879	784	7260	506	530	596	
6	725	993	1310	852	15000	969	947	772	9730	496	519	577	
7	698	936	1140	852	12500	945	1150	755	7070	491	537	569	
8	660	897	1060	824	8700	902	8170	721	5970	492	571	550	
9	634	874	1000	814	6000	884	7110	842	9760	494	586	539	
10	613	885	942	805	4000	887	3180	1040	12100	507	601	526	
11	609	886	3190	838	2900	871	2020	877	9530	498	672	522	
12	603	943	7830	854	2320	7510	1580	845	7200	573	625	617	
13	595	1050	4200	866	1900	11300	1340	810	4750	926	543	529	
14	832	1000	2920	897	3000	7680	1230	788	3500	723	523	495	
15	1480	969	1940	935	7810	4520	1190	5380	2500	1340	510	504	
16	1130	6780	1590	878	7390	2940	1080	4160	1660	643	598	513	
17	845	6870	1450	889	9380	2210	1020	1620	1190	578	773	544	
18	733	2810	1320	1160	6360	1880	978	2710	993	553	676	773	
19	721	1500	1150	3960	3500	2340	964	1490	878	539	605	3500	
20	3080	1400	1030	2320	2200	2690	1030	1010	795	522	566	2250	
21	5750	1430	994	1370	1700	2370	1500	871	732	509	545	1340	
22	2190	1090	943	1160	1500	2190	1280	809	683	498	530	1060	
23	3710	930	1000	1010	1350	1740	1110	805	662	490	518	925	
24	10800	834	1030	922	1300	1490	1020	1200	1420	486	499	781	
25	6800	809	961	908	1250	1250	970	3050	954	482	493	697	
26	2340	896	836	912	1170	1120	930	2930	700	483	495	645	
27	1410	8980	809	859	1120	1050	885	2150	634	1760	492	606	
28	1200	10200	827	820	1060	987	894	1420	599	1910	489	571	
29	1060	6160	812	798	---	983	979	1430	579	1230	481	548	
30	1060	3200	789	776	---	964	878	1180	551	847	484	515	
31	2000	---	785	751	---	911	---	857	---	691	481	---	
TOTAL	58144	71692	59058	32166	160416	68675	47755	44830	100745	21435	17270	23371	
MEAN	1876	2390	1905	1038	5729	2215	1592	1446	3358	691	557	779	
MAX	10800	10200	7830	3960	18000	11300	8170	5380	12100	1910	773	3500	
MIN	595	809	785	751	746	871	831	721	551	482	481	488	
CFSM	1.01	1.29	1.03	.56	3.09	1.20	.86	.78	1.81	.37	.30	.42	
IN.	1.17	1.44	1.19	.65	3.22	1.38	.96	.90	2.02	.43	.35	.47	
CAL YR 1985	TOTAL	847294		MEAN	2321	MAX	15400	MIN	472	CFSM	1.25	IN.	17.02
WTR YR 1986	TOTAL	705557		MEAN	1933	MAX	18000	MIN	481	CFSM	1.04	IN.	14.17



## 07026000 OBION RIVER AT OBION, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1975 to September 1981.

WATER TEMPERATURE: June 1975 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 488 microsiemens, Dec. 14, 1976; minimum, 35 microsiemens, July 21, 22, 1975.

WATER TEMPERATURES: Maximum, 33.5°C, June 18, 1978; minimum, -0.5°C, several days in Jan. and Feb. 1979.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 07...	1130	688	85	7.10	15.0	760	15	--	--	150
JAN 17...	1000	878	98	6.80	8.5	762	7.4	10.8	--	K1000
APR 23...	1040	1110	100	7.50	15.0	765	17	8.6	85	12000
JUL 25...	1030	456	100	7.60	29.0	756	25	--	--	2300

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WH WAT TOTAL FIELD (MG/L AS CACO3)
OCT 07...	K64	22	0	5.5	2.0	6.0	35	0.6	1.9	--
JAN 17...	110	27	0	6.4	2.6	6.8	34	0.6	1.8	33
APR 23...	K70	30	0	7.2	2.9	6.5	31	0.5	1.8	33
JUL 25...	63	27	0	6.8	2.5	7.9	37	0.7	1.4	36

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
OCT 07...	3.8	2.5	5.0	<0.1	12	57	51	0.08	106	0.01
JAN 17...	10	7.8	5.9	0.1	11	55	64	0.08	130	0.01
APR 23...	2.0	8.1	5.7	0.1	10	64	63	0.09	192	0.02
JUL 25...	1.7	5.1	5.3	<0.1	12	56	63	0.08	69	0.02

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 07...	0.42	0.14	0.12	0.7	0.11	0.08	0.07	38	71	93
JAN 17...	0.47	0.53	0.52	0.8	0.12	0.05	0.05	35	83	80
APR 23...	0.53	0.23	0.23	0.7	0.15	0.04	0.04	66	198	96
JUL 25...	0.54	0.23	0.19	0.8	0.15	0.05	0.04	24	30	43

K--Results based on non-ideal colony count.

## OBION RIVER BASIN

07026000 OBION RIVER AT OBION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 07...	50	<1	32	<0.5	<1	1	<3	5	290	13
JAN 17...	20	<1	33	<0.5	<1	<1	<3	2	190	1
APR 23...	110	<1	41	<0.5	<1	5	<3	7	420	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 07...	<4	110	0.7	<10	7	<1	<1	34	<6	19
JAN 17...	<4	260	<0.1	<10	5	<1	<1	43	<6	17
APR 23...	<4	190	<0.1	<10	2	<1	<1	49	<6	16

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 04...	1300	833	100	17.5	63	142	--
NOV 14...	1130	1010	120	19.0	71	194	--
DEC 31...	1630	785	120	7.0	108	229	--
FEB 13...	1745	1940	60	4.0	93	487	--
MAR 26...	1140	1120	95	17.0	1510	4570	--
MAY 08...	1255	715	105	25.0	58	112	--
JUN 03...	1300	3200	--	24.0	3370	29100	94
JUN 12...	1215	7320	80	24.0	931	18400	96
JUL 02...	1300	545	100	27.0	107	157	--
JUL 31...	1420	692	80	31.0	126	235	--
AUG 07...	1130	688	--	--	38	71	--
SEP 03...	1330	515	90	25.0	81	113	--

07026370 NORTH REELFOOT CREEK AT STATE HIGHWAY 22, NEAR CLAYTON, TN

LOCATION.--Lat 36°27'50", long 89°15'13", Obion County, Hydrologic Unit 08010202, on left bank on upstream side of bridge on State Highway 22, 0.9 mi northwest of Clayton, 9.9 mi west of intersection of State Highways 22 and 5, and 11.8 mi northeast of the spillway at Reelfoot Lake.

DRAINAGE AREA.--56.3 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1980 to October 1983, April 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 290 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: June 26-30. Records good.

AVERAGE DISCHARGE.--5 years, (water years 1981-83, 1985-86), 60.7 ft<sup>3</sup>/s, 14.64 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft<sup>3</sup>/s, Dec. 3, 1982, gage height, 19.30 ft; no flow several days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 27	0145	884	16.18	May 15	0930	1,390	18.18
Feb. 3	0045	1,500	18.40	May 18	0600	1,200	17.66
Mar. 12	0545	1,200	17.66	June 9	1530	*1,810	*18.93
Apr. 8	0300	1,060	17.04				

No flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	1.1	124	151	8.1	8.2	5.9	12	5.4	101	.56	9.0	.00	
2	.75	67	103	7.9	607	6.0	11	4.8	91	.49	4.1	.00	
3	.44	36	59	8.2	977	5.6	10	3.6	77	.35	1.7	.00	
4	.31	21	38	8.1	701	4.8	9.1	2.9	51	.23	.86	.00	
5	.23	15	29	7.2	407	4.6	18	2.5	39	.19	.49	.00	
6	.18	11	22	6.8	392	4.3	15	2.1	32	.15	.34	.00	
7	.13	9.5	17	6.9	327	3.6	23	1.8	38	.11	.40	.00	
8	.08	7.9	15	5.8	281	3.1	496	1.7	31	.07	.69	.00	
9	.05	7.4	13	5.3	153	3.0	173	17	890	.04	.96	.00	
10	.03	7.2	12	5.3	68	3.4	73	17	610	.04	.90	.00	
11	.03	6.6	112	5.4	41	3.2	53	61	394	.03	.52	.00	
12	.03	7.1	79	5.9	29	654	36	18	339	.10	.27	.00	
13	.24	8.9	51	5.8	22	329	26	15	255	20	.15	.00	
14	54	7.9	32	5.5	74	228	21	166	121	5.0	.09	.00	
15	7.4	7.4	23	5.6	94	101	17	960	66	8.8	.03	.00	
16	.58	113	20	5.7	225	52	16	368	41	6.9	6.5	.00	
17	.17	51	19	6.3	239	33	15	289	28	3.9	1.1	.00	
18	.20	33	16	37	125	233	15	619	19	2.0	.15	15	
19	.22	21	14	98	65	183	15	272	14	1.1	.47	41	
20	185	36	12	51	40	77	17	184	11	.57	.02	22	
21	145	28	11	36	27	45	17	79	9.2	.44	.02	8.1	
22	69	19	11	25	20	32	15	44	7.2	.30	.02	1.9	
23	221	15	12	18	17	25	14	32	5.2	.22	.01	.32	
24	155	12	12	16	14	20	12	189	4.1	.15	.01	.16	
25	79	11	9.1	15	12	18	11	183	2.9	.11	.01	.06	
26	32	66	8.0	12	11	17	9.2	289	1.9	.09	.00	.02	
27	16	576	8.0	9.1	9.2	16	7.8	164	1.3	15	.00	.01	
28	11	277	8.0	8.6	7.2	15	7.7	76	1.1	.65	.00	.00	
29	8.7	129	8.2	9.3	---	15	6.2	44	.78	58	.00	.00	
30	100	72	7.7	8.4	---	14	5.2	34	.69	35	.00	.00	
31	110	---	8.8	7.9	---	13	---	25	---	18	.00	---	
TOTAL	1197.87	1802.9	940.8	461.1	4992.6	2167.5	1176.2	4169.8	3282.37	178.59	28.81	88.57	
MEAN	38.6	60.1	30.3	14.9	178	69.9	39.2	135	109	5.76	.93	2.95	
MAX	221	576	151	98	977	654	496	960	890	58	9.0	41	
MIN	.03	6.6	7.7	5.3	7.2	3.0	5.2	1.7	.69	.03	.00	.00	
CFSM	.69	1.07	.54	.26	3.16	1.24	.70	2.40	1.94	.10	.02	.05	
IN.	.79	1.19	.62	.30	3.30	1.43	.78	2.76	2.17	.12	.02	.06	
CAL YR 1985	TOTAL	27263.77		MEAN	74.7	MAX	1370	MIN	.03	CFSM	1.33	IN.	18.01
WTR YR 1986	TOTAL	20487.11		MEAN	56.1	MAX	977	MIN	.00	CFSM	1.00	IN.	13.54

## OBION RIVER BASIN

07026370 NORTH REELFOOT CREEK AT STATE HIGHWAY 22, NEAR CLAYTON, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1979 to October 1983, April 1984 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: October 1982 to October 1983, April 1984 to current year.

INSTRUMENTATION.-- Sediment pumping sampler October 1982 to October 1983, April 1984 to current year.

REMARKS.--No flow August 26 to September 17, 28-30.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 6,010 mg/L, June 11, 1985; minimum daily mean, 0 mg/L, many days each year.

SEDIMENT LOADS: Maximum daily, 12,800 tons, June 11, 1985; minimum daily, 0 ton, many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,720 mg/L, May 15; minimum daily mean, 0 mg/L, many days.

SEDIMENT LOADS: Maximum daily, 10,900 tons, May 15; minimum 0 ton, many days.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
OCT					APR				
24...	1700	158	120	20.0	03...	1600	10	440	20.5
31...	1400	140	230	14.0	10...	1510	79	340	17.0
NOV					15...	1430	17	420	16.0
15...	1040	7.4	330	18.0	29...	1155	5.9	500	19.5
20...	1240	43	280	13.0	MAY				
DEC					08...	0935	1.5	480	22.0
03...	1045	58	365	4.5	13...	1500	15	420	24.5
12...	1700	72	285	6.5	22...	1115	43	240	20.5
18...	1330	15	400	3.0	29...	1000	44	260	23.0
23...	1645	12	420	4.0	JUN				
JAN					04...	1410	50	255	24.0
03...	1100	7.9	500	3.0	11...	1110	384	130	24.0
08...	1700	5.4	420	0.5	20...	1040	11	265	25.5
14...	1120	5.6	410	2.0	25...	1230	2.8	260	26.5
22...	1000	26	400	7.0	JUL				
30...	0935	7.7	500	1.0	03...	0925	0.27	310	25.5
FEB					17...	1045	3.7	220	28.0
04...	1330	735	160	13.0	AUG				
05...	1525	414	180	13.0	01...	1050	8.9	195	29.5
13...	1100	25	345	1.0	15...	0915	0.03	280	27.0
20...	1400	40	360	11.0	SEP				
26...	1155	11	385	10.0	23...	0945	0.35	178	24.5
MAR									
06...	1350	4.4	440	9.0					
13...	1000	330	240	12.0					
20...	1025	81	278	10.0					



07026370 NORTH REELFOOT CREEK AT STATE HIGHWAY 22, NEAR CLAYTON, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	1.1	36	.11	124	376	153	151	565	295
2	.75	25	.05	67	220	40	103	175	49
3	.44	20	.02	36	175	17	59	90	14
4	.31	21	.02	21	148	8.4	38	59	6.1
5	.23	21	.01	15	135	5.5	29	45	3.5
6	.18	20	.01	11	123	3.7	22	33	2.0
7	.13	20	.01	9.5	113	2.9	17	28	1.3
8	.08	18	.00	7.9	97	2.1	15	25	1.0
9	.05	17	.00	7.4	90	1.8	13	21	.74
10	.03	16	.00	7.2	79	1.5	12	21	.68
11	.03	15	.00	6.6	70	1.2	112	382	172
12	.03	13	.00	7.1	60	1.2	79	170	36
13	.24	30	.02	8.9	43	1.0	51	95	13
14	54	826	179	7.9	35	.75	32	81	7.0
15	7.4	501	10	7.4	28	.56	23	75	4.7
16	.58	460	.72	113	537	231	20	68	3.7
17	.17	425	.20	51	170	23	19	59	3.0
18	.20	380	.21	33	110	9.8	16	50	2.2
19	.22	300	.18	21	52	2.9	14	49	1.9
20	185	1400	1000	36	96	9.3	12	45	1.5
21	145	685	268	28	59	4.5	11	43	1.3
22	69	830	155	19	44	2.3	11	38	1.1
23	221	846	666	15	31	1.3	12	55	1.8
24	155	425	178	12	25	.81	12	76	2.5
25	79	220	47	11	18	.53	9.1	51	1.3
26	32	175	15	66	183	160	8.0	40	.86
27	16	130	5.6	576	843	1500	8.1	39	.84
28	11	90	2.7	277	500	374	8.0	33	.71
29	8.7	75	1.8	129	240	84	8.2	29	.64
30	100	586	241	72	200	39	7.7	30	.62
31	110	330	98	---	---	---	8.8	29	.69
TOTAL	1197.87	---	2868.66	1802.9	---	2683.05	940.9	---	630.68
JANUARY			FEBRUARY			MARCH			
1	8.1	28	.61	8.2	19	.42	5.9	57	.91
2	7.9	26	.55	607	3460	9480	6.0	55	.89
3	8.2	25	.55	977	1600	4750	5.6	52	.79
4	8.1	23	.50	701	1430	2770	4.8	50	.65
5	7.2	22	.43	407	1000	1100	4.6	45	.56
6	6.8	23	.42	392	820	868	4.3	43	.50
7	6.9	24	.45	327	700	618	3.6	43	.42
8	5.8	24	.38	281	600	455	3.1	42	.35
9	5.3	24	.34	153	500	207	3.0	41	.33
10	5.3	24	.34	68	190	35	3.4	40	.37
11	5.4	23	.34	41	169	19	3.2	39	.34
12	5.9	21	.33	29	148	12	654	3410	7560
13	5.8	20	.31	22	124	7.4	329	1100	977
14	5.5	20	.30	74	643	171	228	900	554
15	5.6	20	.30	94	610	155	101	750	205
16	5.7	21	.32	225	951	815	52	675	95
17	6.3	25	.43	239	850	549	33	650	58
18	37	646	234	125	400	135	233	1860	2090
19	98	1040	362	65	225	39	183	500	247
20	51	310	43	40	175	19	77	250	52
21	36	150	15	27	142	10	45	175	21
22	25	93	6.3	20	125	6.8	32	155	13
23	18	87	4.2	17	108	5.0	25	151	10
24	16	75	3.2	14	91	3.4	20	147	7.9
25	15	67	2.7	12	79	2.6	18	140	6.8
26	12	62	2.0	11	68	2.0	17	132	6.1
27	9.1	51	1.3	9.2	58	1.4	16	130	5.6
28	8.6	42	.98	7.2	58	1.1	15	128	5.2
29	9.3	30	.75	---	---	---	15	122	4.9
30	8.4	20	.45	---	---	---	14	119	4.5
31	8.0	19	.41	---	---	---	13	115	4.0
TOTAL	461.2	---	683.19	4992.6	---	22237.12	2167.5	---	1193.11

## 07026370 NORTH REELFOOT CREEK AT STATE HIGHWAY 22, NEAR CLAYTON, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	12	109	3.5	5.4	68	.99	101	1140	888
2	11	104	3.1	4.8	62	.80	91	710	174
3	10	101	2.7	3.6	60	.58	77	440	91
4	9.1	98	2.4	2.9	58	.45	51	300	41
5	18	379	19	2.5	53	.36	39	150	16
6	15	320	13	2.1	52	.29	32	210	18
7	23	702	56	1.8	58	.28	38	470	48
8	496	2110	3780	1.7	63	.29	31	440	37
9	173	710	332	17	815	116	890	1890	6980
10	73	310	61	17	900	41	610	900	1480
11	53	180	26	61	2400	677	394	800	851
12	36	170	17	18	550	27	339	690	632
13	26	140	9.8	15	165	6.7	255	720	496
14	21	120	6.8	166	1470	3720	121	590	193
15	17	105	4.8	960	3720	10900	66	310	55
16	16	100	4.3	368	1400	1390	41	195	22
17	15	89	3.6	289	1250	975	28	164	12
18	15	76	3.1	619	2680	6220	19	131	6.7
19	15	62	2.5	272	850	624	14	104	3.9
20	17	80	3.7	184	1000	497	11	73	2.2
21	17	70	3.2	79	750	160	9.2	58	1.4
22	15	47	1.9	44	700	83	7.2	50	.97
23	14	40	1.5	32	240	21	5.2	43	.60
24	12	39	1.3	189	2520	3430	4.1	40	.44
25	11	43	1.3	183	1220	749	2.9	38	.30
26	9.2	45	1.1	289	1600	1370	1.9	40	.21
27	7.8	52	1.1	164	810	359	1.3	40	.14
28	7.7	65	1.4	76	540	111	1.1	39	.12
29	6.2	75	1.3	44	250	30	.78	40	.08
30	5.2	72	1.0	34	175	16	.69	41	.08
31	---	---	---	25	120	8.1	---	---	---
TOTAL	1176.2	---	4369.4	4169.8	---	31534.84	3282.37	---	12051.14
JULY			AUGUST			SEPTEMBER			
1	.56	42	.06	9.0	85	2.1	.00	0	.00
2	.49	46	.06	4.1	69	.76	.00	0	.00
3	.35	50	.05	1.7	55	.25	.00	0	.00
4	.23	45	.03	.86	40	.09	.00	0	.00
5	.19	37	.02	.49	33	.04	.00	0	.00
6	.15	25	.01	.34	30	.03	.00	0	.00
7	.11	20	.01	.40	25	.03	.00	0	.00
8	.07	19	.00	.69	21	.04	.00	0	.00
9	.04	17	.00	.96	18	.05	.00	0	.00
10	.04	13	.00	.90	18	.04	.00	0	.00
11	.03	11	.00	.52	19	.03	.00	0	.00
12	.10	50	.01	.27	20	.01	.00	0	.00
13	20	1480	146	.15	20	.01	.00	0	.00
14	5.0	325	4.8	.09	21	.01	.00	0	.00
15	8.8	300	7.1	.03	20	.00	.00	0	.00
16	6.9	128	2.4	6.5	561	20	.00	0	.00
17	3.9	104	1.1	1.1	300	.89	.00	0	.00
18	2.0	93	.50	.15	119	.05	15	1700	272
19	1.1	82	.24	.47	128	.16	41	917	101
20	.57	69	.11	.02	70	.00	22	380	23
21	.44	60	.07	.02	64	.00	8.1	210	4.6
22	.30	53	.04	.02	59	.00	1.9	128	.66
23	.22	42	.02	.01	55	.00	.32	120	.10
24	.15	32	.01	.01	49	.00	.16	111	.05
25	.11	25	.01	.01	40	.00	.06	103	.02
26	.09	19	.00	.00	0	.00	.02	90	.00
27	15	962	81	.00	0	.00	.01	70	.00
28	.65	275	.48	.00	0	.00	.00	0	.00
29	58	1330	518	.00	0	.00	.00	0	.00
30	35	610	58	.00	0	.00	.00	0	.00
31	18	135	6.6	.00	0	.00	---	---	---
TOTAL	178.59	---	826.73	28.81	---	24.59	88.57	---	401.43

TOTAL LOAD FOR YEAR: 90243.94

## 07026400 SOUTH REELFOOT CREEK NEAR CLAYTON , TN

LOCATION.--Lat 36°26'20", long 89°15'37", Obion County, Hydrologic Unit 08010202, at county road bridge, 1.7 mi above confluence with North Reelfoot Creek, and 2 mi southwest of Clayton.

DRAINAGE AREA.--38.6 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Miscellaneous measurements, water years 1955, 1956, 1964, 1983. May 1984 to current year.

REVISED RECORDS.--WRD TN-85-1: 1984.

GAGE.--Water-stage recorder. Elevation of gage is 317 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 27 to Jan. 2, May 9-13. Records good, except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,440 ft<sup>3</sup>/s, Oct. 6, 1984, gage height, 22.22 ft; no flow several days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 2	2330	1,620	18.92	May 14	2245	2,270	20.59
Mar. 12	0615	1,910	19.71	May 18	0545	1,700	19.14
Apr. 8	0300	1,270	17.82	June 9	1600	*2,660	*21.41

No flow for part of Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	8.2	83	118	9.9	10	15	14	8.6	30	2.1	3.1	.11	
2	4.7	44	55	9.9	519	16	14	5.6	47	.90	2.0	.33	
3	4.2	25	34	12	562	16	14	7.6	91	.58	.73	6.1	
4	4.3	17	28	12	451	15	12	7.3	79	.36	2.0	.49	
5	7.2	13	25	10	225	15	32	7.1	66	.31	1.1	.48	
6	8.0	12	20	9.7	213	15	20	6.8	77	.25	.60	1.2	
7	8.8	9.9	18	9.5	168	14	37	6.7	160	.20	.27	1.0	
8	9.5	8.6	18	6.2	143	13	425	7.5	88	.18	.16	.35	
9	12	9.1	15	6.4	102	14	123	12	973	.14	.39	.15	
10	13	14	14	7.7	58	16	88	10	349	.17	1.2	.07	
11	16	14	102	8.5	30	15	55	43	241	.13	.58	.41	
12	18	17	59	9.9	23	591	27	12	183	2.0	.36	2.0	
13	21	24	38	9.7	20	193	20	10	150	2.2	.40	.08	
14	142	15	25	9.6	96	146	19	303	125	13	.32	.03	
15	81	13	21	8.7	100	105	16	678	108	32	.21	.04	
16	42	141	21	9.1	152	65	15	168	96	21	2.2	.06	
17	25	57	21	11	128	33	14	118	77	18	.10	.05	
18	19	44	18	75	72	141	13	461	50	18	1.3	83	
19	24	32	15	143	43	106	14	144	33	17	2.5	17	
20	229	58	15	65	29	44	24	102	18	9.0	.96	.08	
21	83	32	13	39	23	24	21	62	11	5.4	.30	.12	
22	40	25	16	25	21	21	16	42	6.8	4.1	.14	.21	
23	216	20	18	17	20	21	14	32	32	3.1	.05	.16	
24	176	15	17	16	20	19	13	117	38	2.1	.04	.26	
25	138	14	11	17	18	19	13	104	20	1.3	.03	.25	
26	109	44	9.9	14	19	18	11	188	14	.88	.09	.15	
27	68	334	9.0	6.8	18	17	8.6	83	10	1.0	.15	.15	
28	36	128	8.5	6.7	16	16	11	50	6.4	2.7	.11	.17	
29	25	57	9.4	11	---	16	8.2	36	3.9	9.7	.05	.14	
30	39	36	8.3	8.2	---	15	6.6	26	2.7	13	.05	.07	
31	89	---	10	8.2	---	15	---	19	---	12	.08	---	
TOTAL	1715.9	1355.6	810.1	611.7	3299	1789	1118.4	2877.2	3185.8	192.80	21.57	114.71	
MEAN	55.4	45.2	26.1	19.7	118	57.7	37.3	92.8	106	6.22	.70	3.82	
MAX	229	334	118	143	562	591	425	678	973	32	3.1	83	
MIN	4.2	8.6	8.3	6.2	10	13	6.6	5.6	2.7	.13	.03	.03	
CFSM	1.44	1.17	.68	.51	3.06	1.49	.97	2.40	2.75	.16	.02	.10	
IN.	1.65	1.31	.78	.59	3.18	1.72	1.08	2.77	3.07	.19	.02	.11	
CAL YR 1985	TOTAL	17988.14		MEAN	49.3	MAX	896	MIN	.32	CFSM	1.28	IN.	17.34
WTR YR 1986	TOTAL	17091.78		MEAN	46.8	MAX	973	MIN	.03	CFSM	1.21	IN.	16.47

## OBION RIVER BASIN

07026400 SOUTH REELFOOT CREEK NEAR CLAYTON, TN--Continued

## WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964, 1983 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: May 1984 to current year.

INSTRUMENTATION.--Sediment pumping sampler since May 1984.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 7,460 mg/L, May 27, 1984; minimum daily mean, 0 mg/L, many days most years.

SEDIMENT LOADS: Maximum daily, 18,500 tons, May 27, 1984; minimum, 0 ton, many days most years.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,860 mg/L, May 15; minimum daily mean, 12 mg/L, June 22 and July 11.

SEDIMENT LOADS: Maximum daily, 18,000 tons, June 9; minimum, 0 ton, several days.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
OCT					MAR				
25...	1315	142	125	19.5	06...	1310	15	460	8.5
31...	0815	60	380	14.0	12...	1450	316	200	12.0
NOV					13...	1055	196	215	11.5
05...	1630	13	360	10.5	20...	0950	46	318	8.0
14...	1530	15	420	18.0	APR				
20...	1155	57	310	12.5	03...	1315	13	422	20.5
26...	1645	23	460	15.5	10...	1340	85	280	17.0
DEC					15...	1230	16	440	14.0
03...	0915	36	330	3.5	28...	1640	12	370	21.5
12...	1310	54	300	7.0	MAY				
18...	1330	17	490	1.5	07...	1545	7.1	480	24.5
24...	1100	16	520	3.0	14...	0920	6.6	430	22.5
JAN					22...	0945	43	240	19.5
02...	1330	11	500	1.5	29...	1330	37	350	23.5
08...	1610	8.1	460	0.0	JUN				
14...	1215	9.4	405	2.0	04...	1100	79	163	22.5
21...	1715	36	400	9.0	11...	1250	212	155	24.0
30...	1030	5.7	480	1.0	20...	0755	19	300	25.5
FEB					25...	1525	19	210	28.0
04...	1235	608	165	13.0	JUL				
19...	1550	41	420	13.0	03...	1035	0.5	290	25.5
26...	1255	19	465	11.0	17...	0940	18	215	28.0
					25...	0920	1.2	280	26.5



07026400 SOUTH REELFOOT CREEK NEAR CLAYTON, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	8.2	98	2.2	83	419	103	118	553	254
2	4.7	69	.88	44	130	15	55	200	30
3	4.2	51	.58	25	80	5.4	34	90	8.3
4	4.3	49	.57	17	45	2.1	28	71	5.4
5	7.2	45	.87	13	25	.88	25	63	4.3
6	8.0	40	.86	12	20	.65	20	56	3.0
7	8.8	38	.90	9.9	19	.51	18	52	2.5
8	9.5	31	.80	8.6	18	.42	18	49	2.4
9	12	25	.81	9.1	20	.49	15	41	1.7
10	13	22	.77	14	20	.76	14	34	1.3
11	16	19	.82	14	21	.79	102	393	153
12	18	15	.73	17	19	.87	59	150	24
13	21	35	2.7	24	40	2.6	38	110	11
14	142	1160	672	15	21	.85	25	86	5.8
15	81	910	199	13	15	.53	21	60	3.4
16	42	510	58	141	755	417	21	42	2.4
17	25	400	27	57	360	55	21	34	1.9
18	19	260	13	44	200	24	18	28	1.4
19	24	560	36	32	110	9.5	15	25	1.0
20	229	1160	986	58	309	61	15	24	.97
21	83	500	112	32	120	10	13	22	.77
22	40	290	31	25	100	6.8	16	28	1.2
23	216	1640	1410	20	80	4.3	18	32	1.6
24	176	850	404	15	60	2.4	17	34	1.6
25	138	490	183	14	50	1.9	11	26	.77
26	109	310	91	44	321	150	9.9	22	.59
27	68	225	41	334	674	802	9.0	20	.49
28	36	190	18	128	175	60	8.5	20	.46
29	25	125	8.4	57	130	20	9.4	35	.89
30	39	225	24	36	115	11	8.3	30	.67
31	89	405	97	---	---	---	10	40	1.1
TOTAL	1715.9	---	4423.89	1355.6	---	1769.75	810.1	---	527.91
JANUARY			FEBRUARY			MARCH			
1	9.9	30	.80	10	20	.54	15	29	1.2
2	9.9	22	.59	519	3780	10100	16	29	1.3
3	12	21	.68	562	1680	3380	16	29	1.3
4	12	24	.78	451	1440	1840	15	32	1.3
5	10	25	.68	225	750	456	15	36	1.5
6	9.7	23	.60	213	1010	581	15	45	1.8
7	9.5	22	.56	168	590	268	14	40	1.5
8	6.2	26	.44	143	440	170	13	32	1.1
9	6.4	25	.43	102	325	90	14	29	1.1
10	7.7	23	.48	58	200	31	16	48	2.1
11	8.5	30	.69	30	130	11	15	46	1.9
12	9.9	41	1.1	23	103	6.4	591	3010	8780
13	9.7	43	1.1	20	101	5.5	193	850	443
14	9.6	45	1.2	96	575	206	146	540	213
15	8.7	37	.87	100	510	138	105	420	119
16	9.1	29	.71	152	942	479	65	290	51
17	11	28	.83	128	450	156	33	140	12
18	75	1520	845	72	260	51	141	1660	1130
19	143	825	319	43	150	17	106	600	172
20	65	300	53	29	119	9.3	44	175	21
21	39	110	12	23	100	6.2	24	150	9.7
22	25	70	4.7	21	82	4.6	21	130	7.4
23	17	60	2.8	20	66	3.6	21	110	6.2
24	16	52	2.2	20	56	3.0	19	95	4.9
25	17	45	2.1	18	47	2.3	19	80	4.1
26	14	40	1.5	19	38	1.9	18	65	3.2
27	6.8	35	.64	18	34	1.7	17	55	2.5
28	6.7	30	.54	16	32	1.4	16	55	2.4
29	11	29	.86	---	---	---	16	53	2.3
30	8.2	26	.58	---	---	---	15	51	2.1
31	8.2	23	.51	---	---	---	15	53	2.1
TOTAL	611.7	---	1257.97	3299	---	18020.44	1789	---	11004.0

## 07026400 SOUTH REELFOOT CREEK NEAR CLAYTON, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL				MAY			JUNE		
1	14	55	2.1	8.6	70	1.6	30	488	79
2	14	55	2.1	5.6	65	.98	47	961	201
3	14	55	2.1	7.6	60	1.2	91	1320	324
4	12	48	1.6	7.3	59	1.2	79	775	165
5	32	1480	148	7.1	57	1.1	66	610	109
6	20	500	27	6.8	56	1.0	77	1660	451
7	37	1550	215	6.7	58	1.0	160	2680	2060
8	425	2550	4410	7.5	56	1.1	88	1000	238
9	123	650	216	12	90	2.9	973	3740	18000
10	88	425	101	10	85	2.3	349	2640	2490
11	55	225	33	43	250	29	241	1760	1160
12	27	155	11	12	150	4.9	183	970	479
13	20	110	5.9	10	100	2.7	150	850	344
14	19	77	4.0	303	1590	1300	125	590	199
15	16	52	2.2	678	3860	8510	108	380	465
16	15	43	1.7	168	1400	635	96	210	180
17	14	40	1.5	118	1000	319	77	100	21
18	13	36	1.3	461	3140	5250	50	65	8.8
19	14	35	1.3	144	1400	544	33	40	3.6
20	24	70	4.5	102	850	234	18	15	.73
21	21	58	3.3	62	375	63	11	14	.42
22	16	35	1.5	42	210	24	6.8	12	.22
23	14	20	.76	32	175	15	32	915	79
24	13	17	.60	117	1560	1220	38	1400	144
25	13	18	.63	104	1510	501	20	500	27
26	11	15	.45	188	2140	1450	14	269	10
27	8.6	13	.30	83	950	213	10	185	5.0
28	11	51	1.5	50	450	61	6.4	148	2.6
29	8.2	65	1.4	36	175	17	3.9	112	1.2
30	6.6	58	1.0	26	125	8.8	2.7	100	.73
31	---	---	---	19	120	6.2	---	---	---
TOTAL	1118.4	---	5202.74	2877.2	---	20421.98	3185.8	---	27248.30
JULY				AUGUST			SEPTEMBER		
1	2.1	90	.51	3.1	30	.25	.11	13	.00
2	.90	80	.19	2.0	29	.16	.33	13	.01
3	.58	75	.12	.73	30	.06	6.1	300	4.9
4	.36	69	.07	2.0	31	.17	.49	300	.40
5	.31	60	.05	1.1	29	.09	.48	250	.32
6	.25	48	.03	.60	28	.05	1.2	180	.58
7	.20	37	.02	.27	25	.02	1.0	95	.26
8	.18	30	.01	.16	25	.01	.35	83	.08
9	.14	22	.01	.39	26	.03	.15	70	.03
10	.17	16	.01	1.2	30	.10	.07	63	.01
11	.13	12	.00	.58	34	.05	.41	65	.07
12	2.0	450	2.4	.36	39	.04	2.0	91	.49
13	2.2	650	3.9	.40	43	.05	.08	69	.01
14	13	386	74	.32	46	.04	.03	55	.00
15	32	670	58	.21	49	.03	.04	43	.00
16	21	400	23	2.2	590	3.5	.06	45	.01
17	18	280	14	.10	325	.09	.05	47	.01
18	18	480	23	1.3	250	.88	83	1750	1760
19	17	375	17	2.5	210	1.4	17	950	44
20	9.0	200	4.9	.96	180	.47	.08	700	.15
21	5.4	95	1.4	.30	142	.12	.12	400	.13
22	4.1	85	.94	.14	98	.04	.21	184	.10
23	3.1	75	.63	.05	55	.01	.16	153	.07
24	2.1	62	.35	.04	40	.00	.26	120	.08
25	1.3	60	.21	.03	35	.00	.25	92	.06
26	.88	56	.13	.09	28	.01	.15	79	.03
27	1.0	45	.12	.15	20	.01	.15	65	.03
28	2.7	36	.26	.11	18	.01	.17	53	.02
29	9.7	50	1.3	.05	15	.00	.14	48	.02
30	13	42	1.5	.05	13	.00	.07	41	.01
31	12	48	1.6	.08	13	.00	---	---	---
TOTAL	192.80	---	229.66	21.57	---	7.69	114.71	---	1811.88
TOTAL LOAD FOR YEAR: 91926.21									

## OBION RIVER BASIN

191

07026640 RUNNING SLOUGH NEAR LEDFORD, KY

LOCATION.--Lat 36°32'28", long 89°18'59", Fulton County, Hydrologic Unit 08010202, on county road on right bank, 1.1 mi northwest of Ledford.

DRAINAGE AREA.--10.8 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1982 to October 1983, April 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 290 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 278 ft<sup>3</sup>/s, May 7, 1984, gage height, 8.86 ft; maximum gage height, 8.98 ft May 19, 1983; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 15	1030	*250	*8.82	May 26	1145	122	7.08

No flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	.00	1.5	20	.00	12	15	2.3	2.5	.29	.00	.00	.00	
2	.00	1.3	18	.00	19	15	1.6	2.2	6.9	.00	.00	.00	
3	.00	1.9	17	.00	59	16	.73	1.4	14	.00	.00	.00	
4	.00	.81	16	.00	63	17	.19	.83	4.5	.00	.00	.00	
5	.00	.18	16	.00	52	17	.38	1.2	2.1	.00	.00	.00	
6	.00	.00	17	.00	39	19	.73	1.2	2.5	.00	.00	.00	
7	.00	.00	18	.00	31	17	.86	.59	.63	.00	.00	.00	
8	.00	.00	18	.00	21	16	3.1	.07	.25	.00	.00	.00	
9	.00	.00	19	.00	14	14	3.1	.15	40	.00	.00	.00	
10	.00	.00	19	.00	11	13	1.5	.98	88	.00	.00	.00	
11	.00	.00	21	.00	11	14	.46	1.7	74	.00	.00	.00	
12	.00	.00	26	.00	12	47	2.6	1.4	44	.00	.00	.00	
13	.00	.00	26	8.8	11	49	4.0	4.4	21	.00	.00	.00	
14	.00	.00	21	10	12	36	4.7	21	6.6	.00	.00	.00	
15	.00	.00	19	4.1	11	24	3.6	230	1.8	.00	.00	.00	
16	.00	.00	17	4.9	23	15	2.4	197	.88	.00	.00	.00	
17	.00	.00	17	3.8	36	12	2.2	140	.24	.00	.00	.00	
18	.00	.00	15	4.4	33	12	1.9	136	.00	.00	.00	.00	
19	.00	.00	10	6.1	24	20	1.6	103	.00	.00	.00	.00	
20	.00	.00	6.1	9.5	15	25	1.5	72	.00	.00	.00	.00	
21	.00	.00	4.0	9.3	10	15	1.5	50	.00	.00	.00	.00	
22	.00	.00	4.0	7.7	10	11	1.3	33	.00	.00	.00	.00	
23	.00	.00	6.1	8.3	11	7.5	.90	20	.00	.00	.00	.00	
24	.00	.00	6.6	7.4	11	6.2	.38	17	.02	.00	.00	.00	
25	.00	.00	3.6	6.7	13	5.5	4.4	40	.00	.00	.00	.00	
26	.00	4.4	1.6	6.3	15	4.9	3.5	105	.00	.00	.00	.00	
27	.00	19	.97	6.2	16	5.4	3.4	80	.00	.00	.00	.00	
28	.00	28	.74	7.6	16	5.4	1.9	44	.00	.00	.00	.00	
29	.00	25	.00	8.6	---	3.4	1.9	22	.00	.00	.00	.00	
30	.00	21	.00	8.8	---	3.1	2.3	8.0	.00	.00	.00	.00	
31	.62	---	.00	10	---	2.7	---	1.6	---	.00	.00	---	
TOTAL	.62	103.09	383.71	138.50	611	483.1	60.93	1338.22	307.71	.00	.00	.00	
MEAN	.02	3.44	12.4	4.47	21.8	15.6	2.03	43.2	10.3	.00	.00	.00	
MAX	.62	28	26	10	63	49	4.7	230	88	.00	.00	.00	
MIN	.00	.00	.00	.00	10	2.7	.19	.07	.00	.00	.00	.00	
CFSM	.00	.32	1.15	.41	2.02	1.44	.19	4.00	.95	.00	.00	.00	
IN.	.00	.36	1.32	.48	2.10	1.66	.21	4.61	1.06	.00	.00	.00	
CAL YR 1985	TOTAL	5035.32		MEAN	13.8	MAX	208	MIN	.00	CFSM	1.28	IN.	17.34
WTR YR 1986	TOTAL	3426.88		MEAN	9.39	MAX	230	MIN	.00	CFSM	.87	IN.	11.80

07026640 RUNNING SLOUGH NEAR LEDFORD, KY--Continued

## WATER QUALITY RECORDS

PERIOD OF RECORD.--July 1982 to October 1983, April 1984 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: JULY 1982 to October 1983, April 1984 to current year.

INSTRUMENTATION.--Sediment pumping sampler July 1982 to October 1983, April 1984 to current year.

REMARKS.--No flow many days.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,300 mg/L, May 15, 1986; minimum daily mean, 0 mg/L, many days each year.

SEDIMENT LOADS: Maximum daily, 764 tons, May 15, 1986; minimum daily, 0 ton, many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,300 mg/L, May 15; minimum daily mean, 0 mg/L, many days.

SEDIMENT LOADS: Maximum daily, 764 tons, May 15; minimum daily, 0 ton, many days.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
NOV					APR				
27...	1015	17	420	11.0	04...	1520	0.26	550	19.5
DEC					10...	1205	1.4	650	16.0
03...	1220	17	500	4.5	29...	1050	2.2	775	19.0
18...	1115	15	480	0.0	MAY				
23...	1550	6.7	560	3.0	13...	1325	15	600	22.5
FEB					22...	1020	34	235	18.0
04...	1400	66	250	14.0	28...	1430	47	300	22.0
05...	1640	48	315	16.0	JUN				
20...	1100	15	540	11.0	03...	1250	18	370	23.0
26...	0955	15	630	6.0	11...	1420	79	220	24.5
MAR									
06...	1130	19	520	8.0					
12...	1715	56	200	11.5					
13...	0900	50	390	12.0					
20...	0850	26	540	8.5					



## 07026640 RUNNING SLOUGH NEAR LEDFORD, KY--Continued

## SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	.00	0	.00	1.5	42	.17	20	45	2.4
2	.00	0	.00	1.3	21	.07	18	23	1.1
3	.00	0	.00	1.9	32	.16	17	11	.50
4	.00	0	.00	.81	22	.05	16	11	.48
5	.00	0	.00	.18	10	.00	16	11	.48
6	.00	0	.00	.00	0	.00	17	10	.46
7	.00	0	.00	.00	0	.00	18	10	.49
8	.00	0	.00	.00	0	.00	18	10	.49
9	.00	0	.00	.00	0	.00	19	9	.46
10	.00	0	.00	.00	0	.00	19	9	.46
11	.00	0	.00	.00	0	.00	21	21	1.2
12	.00	0	.00	.00	0	.00	26	45	3.2
13	.00	0	.00	.00	0	.00	26	48	3.4
14	.00	0	.00	.00	0	.00	21	40	2.3
15	.00	0	.00	.00	0	.00	19	35	1.8
16	.00	0	.00	.00	0	.00	17	25	1.1
17	.00	0	.00	.00	0	.00	17	18	.83
18	.00	0	.00	.00	0	.00	15	15	.61
19	.00	0	.00	.00	0	.00	10	12	.32
20	.00	0	.00	.00	0	.00	6.1	12	.20
21	.00	0	.00	.00	0	.00	4.0	12	.13
22	.00	0	.00	.00	0	.00	4.0	12	.13
23	.00	0	.00	.00	0	.00	6.1	18	.30
24	.00	0	.00	.00	0	.00	6.6	18	.32
25	.00	0	.00	.00	0	.00	3.6	18	.17
26	.00	0	.00	4.4	15	.18	1.6	12	.05
27	.00	0	.00	19	41	2.1	.97	9	.02
28	.00	0	.00	28	45	3.4	.74	5	.01
29	.00	0	.00	25	35	2.4	.00	0	.00
30	.00	0	.00	21	52	2.9	.00	0	.00
31	.62	11	.02	---	---	---	.00	0	.00
TOTAL	0.62	---	0.02	103.09	---	11.43	383.71	---	23.41
JANUARY			FEBRUARY			MARCH			
1	.00	0	.00	12	40	1.3	15	22	.89
2	.00	0	.00	19	229	17	15	21	.85
3	.00	0	.00	59	319	48	16	22	.95
4	.00	0	.00	63	165	28	17	25	1.1
5	.00	0	.00	52	100	14	17	23	1.1
6	.00	0	.00	39	78	8.2	19	22	1.1
7	.00	0	.00	31	60	5.0	17	20	.92
8	.00	0	.00	21	50	2.8	16	20	.86
9	.00	0	.00	14	43	1.6	14	20	.76
10	.00	0	.00	11	35	1.0	13	19	.67
11	.00	0	.00	11	31	.92	14	18	.68
12	.00	0	.00	12	30	.97	47	454	64
13	8.8	80	3.9	11	24	.71	49	130	17
14	10	103	2.8	12	30	.97	36	92	8.9
15	4.1	61	.68	11	32	.95	24	70	4.5
16	4.9	65	.86	23	100	6.2	15	68	2.8
17	3.8	65	.67	36	60	5.8	12	49	1.6
18	4.4	81	.96	33	43	3.8	12	43	1.4
19	6.1	111	1.8	24	32	2.1	20	50	2.7
20	9.5	121	3.1	15	22	.89	25	37	2.5
21	9.3	120	3.0	10	20	.54	15	28	1.1
22	7.7	110	2.3	10	29	.78	11	25	.74
23	8.3	105	2.4	11	22	.65	7.5	21	.43
24	7.4	101	2.0	11	19	.56	6.2	25	.42
25	6.7	96	1.7	13	35	1.2	5.5	28	.42
26	6.3	83	1.4	15	30	1.2	4.9	30	.40
27	6.2	72	1.2	16	22	.95	5.4	32	.47
28	7.6	60	1.2	16	22	.95	5.4	32	.47
29	8.6	51	1.2	---	---	---	3.4	31	.28
30	8.8	43	1.0	---	---	---	3.1	35	.29
31	10	38	1.0	---	---	---	2.7	42	.31
TOTAL	138.50	---	33.17	611	---	157.04	483.1	---	120.61

## 07026640 RUNNING SLOUGH NEAR LEDFORD, KY--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	2.3	49	.30	2.5	122	.82	.29	50	.04
2	1.6	63	.27	2.2	109	.65	6.9	100	1.9
3	.73	85	.17	1.4	98	.37	14	140	5.3
4	.19	105	.05	.83	89	.20	4.5	145	1.8
5	.38	95	.10	1.2	79	.26	2.1	150	.85
6	.73	85	.17	1.2	71	.23	2.5	100	.68
7	.86	72	.17	.59	66	.11	.63	60	.10
8	3.1	80	.67	.07	58	.01	.25	50	.03
9	3.1	31	.26	.15	51	.02	40	173	31
10	1.5	88	.36	.98	45	.12	88	190	45
11	.46	59	.07	1.7	39	.18	74	180	36
12	2.6	59	.41	1.4	32	.12	44	125	15
13	4.0	65	.70	4.4	27	.32	21	100	5.7
14	4.7	70	.89	21	541	142	6.6	70	1.2
15	3.6	72	.70	230	1300	764	1.8	60	.29
16	2.4	70	.45	197	380	202	.88	40	.10
17	2.2	68	.40	140	310	117	.24	15	.01
18	1.9	62	.32	136	840	308	.00	0	.00
19	1.6	60	.26	103	640	178	.00	0	.00
20	1.5	59	.24	72	490	95	.00	0	.00
21	1.5	59	.24	50	410	55	.00	0	.00
22	1.3	60	.21	33	360	32	.00	0	.00
23	.90	60	.15	20	265	14	.00	0	.00
24	.38	65	.07	17	275	13	.02	200	.01
25	4.4	95	1.1	40	255	28	.00	0	.00
26	3.5	140	1.3	105	630	179	.00	0	.00
27	3.4	148	1.4	80	230	50	.00	0	.00
28	1.9	141	.72	44	185	22	.00	0	.00
29	1.9	135	.69	22	185	11	.00	0	.00
30	2.3	131	.81	8.0	120	2.6	.00	0	.00
31	---	---	---	1.6	70	.30	---	---	---
TOTAL	60.93	---	13.65	1338.22	---	2216.31	307.71	---	145.01
JULY			AUGUST			SEPTEMBER			
1	.00	0	.00	.00	0	.00	.00	0	.00
2	.00	0	.00	.00	0	.00	.00	0	.00
3	.00	0	.00	.00	0	.00	.00	0	.00
4	.00	0	.00	.00	0	.00	.00	0	.00
5	.00	0	.00	.00	0	.00	.00	0	.00
6	.00	0	.00	.00	0	.00	.00	0	.00
7	.00	0	.00	.00	0	.00	.00	0	.00
8	.00	0	.00	.00	0	.00	.00	0	.00
9	.00	0	.00	.00	0	.00	.00	0	.00
10	.00	0	.00	.00	0	.00	.00	0	.00
11	.00	0	.00	.00	0	.00	.00	0	.00
12	.00	0	.00	.00	0	.00	.00	0	.00
13	.00	0	.00	.00	0	.00	.00	0	.00
14	.00	0	.00	.00	0	.00	.00	0	.00
15	.00	0	.00	.00	0	.00	.00	0	.00
16	.00	0	.00	.00	0	.00	.00	0	.00
17	.00	0	.00	.00	0	.00	.00	0	.00
18	.00	0	.00	.00	0	.00	.00	0	.00
19	.00	0	.00	.00	0	.00	.00	0	.00
20	.00	0	.00	.00	0	.00	.00	0	.00
21	.00	0	.00	.00	0	.00	.00	0	.00
22	.00	0	.00	.00	0	.00	.00	0	.00
23	.00	0	.00	.00	0	.00	.00	0	.00
24	.00	0	.00	.00	0	.00	.00	0	.00
25	.00	0	.00	.00	0	.00	.00	0	.00
26	.00	0	.00	.00	0	.00	.00	0	.00
27	.00	0	.00	.00	0	.00	.00	0	.00
28	.00	0	.00	.00	0	.00	.00	0	.00
29	.00	0	.00	.00	0	.00	.00	0	.00
30	.00	0	.00	.00	0	.00	.00	0	.00
31	.00	0	.00	.00	0	.00	---	---	---
TOTAL	0.00	---	0.00	0.00	---	0.00	0.00	---	0.00

TOTAL LOAD FOR YEAR: 2720.65

## OBION RIVER BASIN

195

07026690 REELFOOT LAKE NEAR PHILLIPPY, TN

LOCATION.--Lat 36°27'59", long 89°20'56", Lake County, Hydrologic Unit 08010202, 1.85 mi southeast of Phillippy, 3.0 mi northeast of New Markham.

DRAINAGE AREA.--240 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 270.22 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 13.85 ft, May 8, 1984; minimum, 9.71 ft, Aug. 2, 3, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 12.93 ft, Feb. 5; minimum, 10.24 ft, Oct. 11-12.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	10.37	10.33	10.35	11.02	10.97	11.00	11.81	11.72	11.78	11.92	11.91	11.91
2	10.35	10.34	10.35	11.02	11.01	11.02	11.81	11.80	11.81	11.95	11.92	11.93
3	10.39	10.38	10.38	11.02	11.00	11.02	11.80	11.78	11.79	11.95	11.92	11.93
4	10.41	10.38	10.39	11.02	10.98	11.00	11.80	11.78	11.79	11.93	11.92	11.92
5	10.39	10.36	10.38	11.03	11.00	11.02	11.82	11.80	11.81	11.95	11.91	11.92
6	10.37	10.36	10.36	11.08	11.03	11.05	11.80	11.76	11.78	11.95	11.92	11.94
7	10.37	10.35	10.36	11.05	11.01	11.03	11.82	11.78	11.80	11.91	11.82	11.85
8	10.39	10.36	10.38	11.08	11.03	11.05	11.85	11.79	11.82	11.88	11.82	11.85
9	10.35	10.32	10.34	11.12	11.07	11.10	11.85	11.79	11.82	11.90	11.88	11.90
10	10.32	10.31	10.32	11.14	11.07	11.11	11.89	11.85	11.86	11.90	11.90	11.90
11	10.26	10.24	10.25	11.06	11.02	11.03	11.94	11.87	11.90	11.90	11.90	11.90
12	10.28	10.24	10.26	11.08	11.04	11.06	11.87	11.87	11.87	11.90	11.89	11.90
13	10.29	10.25	10.26	11.12	11.08	11.10	11.93	11.85	11.88	11.90	11.86	11.88
14	10.40	10.30	10.35	11.13	11.07	11.11	12.00	11.93	11.97	11.93	11.88	11.91
15	10.37	10.36	10.37	11.15	11.07	11.10	12.01	12.00	12.01	11.90	11.88	11.89
16	10.37	10.35	10.36	11.20	11.17	11.18	12.01	12.00	12.01	11.92	11.90	11.91
17	10.37	10.35	10.36	11.22	11.18	11.20	12.01	12.00	12.01	11.93	11.92	11.92
18	10.44	10.37	10.41	11.30	11.23	11.27	12.00	11.95	11.97	12.00	11.91	11.94
19	10.43	10.40	10.42	11.35	11.29	11.32	11.99	11.98	11.99	12.02	12.00	12.00
20	10.52	10.39	10.48	11.30	11.18	11.24	12.00	11.99	12.00	12.05	12.02	12.04
21	10.60	10.52	10.56	11.20	11.15	11.17	11.99	11.98	11.99	12.13	12.06	12.10
22	10.61	10.60	10.61	11.23	11.20	11.22	11.98	11.98	11.98	12.11	12.04	12.07
23	10.76	10.61	10.69	11.27	11.23	11.25	11.98	11.98	11.98	12.06	12.05	12.06
24	10.86	10.77	10.82	11.24	11.21	11.22	11.98	11.93	11.97	12.10	12.06	12.09
25	10.87	10.85	10.86	11.32	11.24	11.27	11.96	11.93	11.94	12.10	12.08	12.09
26	10.87	10.86	10.87	11.44	11.32	11.37	11.99	11.96	11.98	12.07	12.00	12.05
27	10.86	10.86	10.86	11.59	11.40	11.47	11.98	11.94	11.96	12.06	11.97	12.00
28	10.85	10.77	10.81	11.69	11.60	11.66	11.94	11.92	11.92	12.10	12.06	12.08
29	10.80	10.78	10.79	11.71	11.70	11.71	11.92	11.92	11.92	12.08	12.02	12.05
30	10.81	10.79	10.80	11.72	11.71	11.72	11.92	11.92	11.92	12.04	12.01	12.03
31	10.97	10.80	10.90	---	---	---	11.92	11.91	11.92	12.07	12.04	12.05
MONTH	10.97	10.24	10.51	11.72	10.97	11.20	12.01	11.72	11.91	12.13	11.82	11.97

## 07026690 REELFOOT LAKE NEAR PHILLIPY, TN--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	12.10	12.07	12.08	11.89	11.87	11.88	11.81	11.79	11.80	11.96	11.93	11.94
2	12.35	12.07	12.17	11.93	11.89	11.91	11.79	11.77	11.77	11.93	11.89	11.91
3	12.77	12.36	12.58	11.91	11.87	11.88	11.82	11.77	11.79	11.90	11.89	11.89
4	12.92	12.77	12.87	11.88	11.87	11.87	11.82	11.78	11.80	11.91	11.90	11.91
5	12.93	12.90	12.92	11.93	11.88	11.90	11.89	11.82	11.87	11.94	11.90	11.92
6	12.92	12.87	12.90	11.89	11.88	11.89	11.91	11.88	11.89	11.93	11.91	11.92
7	12.92	12.87	12.90	11.89	11.82	11.85	11.96	11.90	11.92	11.91	11.88	11.89
8	12.86	12.79	12.83	11.89	11.82	11.85	12.11	11.98	12.04	11.87	11.84	11.86
9	12.79	12.71	12.75	11.96	11.89	11.93	12.14	12.11	12.13	11.89	11.84	11.85
10	12.70	12.63	12.66	12.01	11.94	11.98	12.14	12.12	12.13	11.91	11.86	11.87
11	12.63	12.62	12.62	11.97	11.84	11.92	12.12	12.09	12.10	11.97	11.92	11.95
12	12.62	12.55	12.59	12.29	11.94	12.14	12.09	12.06	12.07	11.96	11.94	11.95
13	12.55	12.48	12.51	12.35	12.30	12.34	12.06	12.02	12.04	11.95	11.94	11.94
14	12.48	12.46	12.47	12.35	12.30	12.33	12.06	12.02	12.04	12.12	11.94	11.97
15	12.46	12.43	12.44	12.30	12.24	12.28	12.04	12.00	12.02	12.60	12.12	12.34
16	12.50	12.43	12.47	12.23	12.17	12.20	12.00	11.96	11.97	12.71	12.62	12.68
17	12.51	12.49	12.50	12.17	12.14	12.15	11.97	11.96	11.96	12.72	12.69	12.71
18	12.49	12.44	12.46	12.24	12.13	12.17	11.97	11.96	11.97	12.85	12.71	12.80
19	12.44	12.37	12.41	12.24	12.23	12.24	11.98	11.96	11.97	12.85	12.81	12.84
20	12.37	12.30	12.35	12.23	12.12	12.16	12.02	11.98	12.00	12.81	12.70	12.75
21	12.29	12.22	12.25	12.11	12.05	12.08	12.02	11.99	12.01	12.69	12.58	12.64
22	12.22	12.19	12.20	12.05	12.04	12.05	11.99	11.97	11.98	12.57	12.50	12.54
23	12.19	12.15	12.17	12.04	11.99	12.02	12.00	11.99	12.00	12.49	12.39	12.44
24	12.15	12.05	12.09	11.99	11.94	11.96	12.01	11.99	12.00	12.41	12.34	12.38
25	12.05	12.01	12.03	11.94	11.91	11.92	12.01	11.99	12.00	12.43	12.41	12.42
26	12.01	11.98	12.00	11.91	11.87	11.90	11.99	11.98	11.99	12.59	12.44	12.55
27	11.98	11.87	11.94	11.87	11.78	11.81	12.00	11.98	11.99	12.60	12.57	12.59
28	11.87	11.85	11.86	11.79	11.78	11.79	12.03	12.00	12.01	12.57	12.47	12.53
29	---	---	---	11.81	11.79	11.80	11.99	11.96	11.97	12.47	12.35	12.41
30	---	---	---	11.80	11.80	11.80	11.98	11.96	11.97	12.35	12.21	12.30
31	---	---	---	11.81	11.80	11.80	---	---	---	12.21	12.15	12.18
MONTH	12.93	11.85	12.43	12.35	11.78	11.99	12.14	11.77	11.97	12.85	11.84	12.25
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	12.14	12.09	12.12	11.79	11.77	11.78	11.28	11.26	11.27	10.66	10.65	10.66
2	12.09	12.03	12.07	11.78	11.70	11.74	11.26	11.25	11.26	10.65	10.64	10.65
3	12.03	11.99	12.02	11.71	11.68	11.70	11.25	11.16	11.22	10.65	10.64	10.64
4	12.06	12.02	12.04	11.69	11.67	11.68	11.16	11.13	11.15	10.68	10.65	10.68
5	12.08	12.05	12.07	11.67	11.66	11.67	11.13	11.12	11.13	10.67	10.64	10.66
6	12.09	12.07	12.08	11.64	11.61	11.64	11.14	11.11	11.13	10.66	10.63	10.65
7	12.10	12.07	12.08	11.62	11.60	11.61	11.13	11.10	11.12	10.64	10.55	10.59
8	12.14	12.09	12.11	11.60	11.59	11.60	11.11	11.09	11.11	10.58	10.56	10.57
9	12.44	12.14	12.27	11.59	11.58	11.59	11.09	11.07	11.09	10.59	10.58	10.59
10	12.73	12.46	12.64	11.58	11.57	11.57	11.09	11.07	11.08	10.63	10.59	10.62
11	12.73	12.69	12.72	11.58	11.56	11.56	11.06	11.00	11.03	10.72	10.63	10.67
12	12.69	12.58	12.64	11.61	11.55	11.57	11.00	10.97	10.99	10.70	10.60	10.65
13	12.57	12.45	12.52	11.59	11.52	11.55	10.97	10.95	10.97	10.61	10.55	10.58
14	12.45	12.38	12.42	11.56	11.52	11.53	10.97	10.95	10.96	10.57	10.57	10.57
15	12.38	12.33	12.36	11.56	11.55	11.55	10.95	10.93	10.95	10.57	10.55	10.57
16	12.33	12.24	12.29	11.55	11.52	11.54	11.01	10.94	10.98	10.55	10.51	10.54
17	12.24	12.14	12.19	11.52	11.50	11.52	11.00	10.95	10.97	10.58	10.52	10.54
18	12.14	12.07	12.10	11.50	11.49	11.50	10.96	10.92	10.94	10.65	10.56	10.61
19	12.06	11.99	12.03	11.49	11.45	11.47	10.94	10.90	10.93	10.64	10.63	10.64
20	11.99	11.95	11.97	11.45	11.40	11.43	10.91	10.88	10.90	10.64	10.62	10.63
21	11.95	11.94	11.94	11.40	11.37	11.39	10.88	10.86	10.87	10.61	10.59	10.61
22	11.92	11.91	11.92	11.38	11.35	11.37	10.88	10.86	10.87	10.61	10.60	10.60
23	11.91	11.88	11.90	11.35	11.33	11.34	10.88	10.87	10.88	10.62	10.60	10.61
24	11.88	11.87	11.88	11.34	11.32	11.33	10.86	10.84	10.85	10.61	10.57	10.60
25	11.87	11.84	11.86	11.33	11.31	11.32	10.83	10.83	10.83	10.60	10.56	10.58
26	11.84	11.84	11.84	11.36	11.28	11.31	10.83	10.82	10.83	10.56	10.53	10.55
27	11.86	11.83	11.85	11.37	11.36	11.36	10.84	10.77	10.81	10.54	10.52	10.53
28	11.83	11.80	11.82	11.35	11.34	11.35	10.77	10.65	10.70	10.52	10.48	10.50
29	11.80	11.79	11.79	11.34	11.33	11.34	10.68	10.67	10.68	10.52	10.49	10.50
30	11.79	11.77	11.78	11.33	11.32	11.33	10.68	10.67	10.68	10.51	10.49	10.50
31	---	---	---	11.32	11.28	11.32	10.67	10.66	10.67	---	---	---
MONTH	12.73	11.77	12.11	11.79	11.28	11.50	11.28	10.65	10.96	10.72	10.48	10.60



## OBION RIVER BASIN

197

07026795 INDIAN CREEK NEAR SAMBURG, TN

LOCATION.--Lat 36°22'59", long 89°20'32", Obion County, Hydrologic Unit 08010202, on left bank upstream from a bridge on county road, 0.6 mi northeast of the four-way stop on State Highway 22 in Samburg.

DRAINAGE AREA.--8.01 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1982 to October 1983, September 1984 to March, 1986 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 315 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,090 ft<sup>3</sup>/s, May 12, 1983, gage height, 9.87 ft; no flow several days each year.

EXTREMES FOR CURRENT PERIOD.--October to March 1986. Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s and maximum: (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 23	1700	257	3.77	Feb. 4	0630	206	3.44
Feb. 2	2315	*286	*3.94				

Minimum discharge, .80 ft<sup>3</sup>/s, Oct. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	5.2	16	2.3	2.6	2.8						
2	.98	3.3	5.9	2.1	96	3.1						
3	1.0	2.6	4.4	2.2	72	3.0						
4	1.1	2.2	4.1	2.3	77	2.8						
5	1.1	2.0	3.8	2.1	15	2.9						
6	1.0	2.0	3.2	2.0	15	2.9						
7	1.1	1.9	3.1	2.1	8.4	2.6						
8	1.1	1.8	3.0	1.7	6.8	2.5						
9	1.1	1.8	3.0	1.8	5.4	2.9						
10	1.2	2.0	2.8	1.9	4.9	3.5						
11	1.2	2.2	15	2.0	4.5	2.9						
12	1.1	2.7	6.6	2.1	4.1	56						
13	3.0	3.7	5.0	2.1	3.8	14						
14	24	2.5	3.5	2.0	15	8.5						
15	3.1	2.4	3.4	2.0	9.2	6.4						
16	1.5	24	3.4	2.0	20	5.3						
17	1.4	5.5	3.4	2.3	15	4.8						
18	1.4	4.6	2.9	18	8.4	43						
19	2.0	4.0	2.3	16	6.6	17						
20	25	8.9	2.6	5.0	5.4	8.4						
21	3.4	4.5	2.4	4.0	4.5	6.9						
22	2.1	3.9	2.7	3.2	4.2	6.1						
23	44	3.4	3.0	2.8	3.8	5.9						
24	8.2	3.2	2.7	2.9	3.9	5.2						
25	2.8	3.1	2.0	3.1	3.5	5.0						
26	2.2	6.4	2.0	2.9	3.7	4.9						
27	2.0	40	2.3	2.5	3.4	4.5						
28	1.8	9.7	2.4	2.5	2.9	4.3						
29	1.9	6.0	2.3	2.8	---	4.1						
30	3.0	4.7	2.2	2.4	---	3.6						
31	17	---	2.5	2.5	---	3.5						
TOTAL	162.98	170.2	123.9	105.6	425.0	249.3						
MEAN	5.26	5.67	4.00	3.41	15.2	8.04						
MAX	44	40	16	18	96	56						
MIN	.98	1.8	2.0	1.7	2.6	2.5						
CFSM	.66	.71	.50	.43	1.90	1.00						
IN.	.76	.79	.58	.49	1.97	1.16						
CAL YR 1985	TOTAL	2602.57		MEAN	7.13	MAX	185	MIN	.35	CFSM	.89	IN. 12.09

## OBION RIVER BASIN

07027000 REELFOOT LAKE NEAR TIPTONVILLE, TN

LOCATION.--Lat 36°21'09", long 89°25'07", Lake County, Hydrologic Unit 08010202, at Middle Landing in Reelfoot Lake State Park, 0.4 mi east of Blue Bank, 0.8 mi west of the spillway, and 3.3 mi southeast of Tiptonville.

DRAINAGE AREA.--240 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 270.22 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 15.65 ft, from recorded range in stage, about Apr. 26, 1973; minimum, 9.59 ft, July 6, 7, 8, 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1937 reached a stage of about 17.0 ft, at spillway, present datum, from information by local resident. Minimum stage at spillway, 9.30 ft, Nov. 20, 21, 1953 at a datum of 270.29 ft above National Geodetic Vertical Datum of 1929.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 13.11 ft, Feb. 6; minimum 10.28 ft, Oct.8-9.

## GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	10.62	10.57	10.60	11.22	11.20	11.21	11.90	11.83	11.87	12.15	12.15	12.15
2	10.57	10.54	10.56	11.26	11.21	11.24	12.03	11.88	11.96	12.15	12.10	12.14
3	10.54	10.49	10.52	11.32	11.25	11.28	12.03	12.00	12.01	12.14	12.10	12.12
4	10.49	10.43	10.47	11.41	11.28	11.33	12.00	12.00	12.00	12.15	12.11	12.13
5	10.43	10.41	10.43	11.32	11.25	11.27	12.05	12.00	12.01	12.15	12.09	12.12
6	10.41	10.39	10.41	11.25	11.21	11.23	12.13	12.05	12.08	12.13	12.09	12.10
7	10.39	10.34	10.37	11.39	11.21	11.30	12.05	12.03	12.04	12.27	12.15	12.24
8	10.34	10.28	10.32	11.24	11.19	11.21	12.04	12.03	12.03	12.24	12.21	12.23
9	10.31	10.28	10.30	11.18	11.14	11.16	12.05	12.04	12.04	12.21	12.13	12.18
10	10.35	10.31	10.34	11.20	11.11	11.15	12.05	12.04	12.05	12.13	12.13	12.13
11	10.36	10.35	10.35	11.26	11.21	11.25	12.23	12.04	12.14	12.13	12.13	12.13
12	10.36	10.32	10.34	11.29	11.24	11.26	12.27	12.21	12.23	12.13	12.12	12.12
13	10.76	10.32	10.35	11.29	11.26	11.28	12.35	12.28	12.31	12.18	12.11	12.15
14	10.75	10.56	10.62	11.33	11.27	11.28	12.30	12.17	12.22	12.20	12.06	12.12
15	10.59	10.56	10.58	11.33	11.29	11.31	12.19	12.17	12.17	12.16	12.12	12.13
16	10.56	10.55	10.56	11.38	11.33	11.35	12.21	12.19	12.20	12.12	12.07	12.10
17	10.55	10.55	10.55	11.35	11.33	11.34	12.32	12.19	12.22	12.10	12.09	12.09
18	10.55	10.52	10.54	11.35	11.33	11.34	12.37	12.29	12.33	12.24	12.10	12.15
19	10.56	10.52	10.54	11.44	11.30	11.34	12.29	12.22	12.26	12.28	12.23	12.26
20	10.84	10.57	10.74	11.58	11.48	11.55	12.22	12.22	12.22	12.26	12.26	12.26
21	10.73	10.72	10.73	11.58	11.49	11.56	12.22	12.21	12.21	12.28	12.17	12.23
22	10.76	10.72	10.74	11.48	11.46	11.47	12.21	12.19	12.20	12.36	12.12	12.32
23	10.96	10.76	10.87	11.51	11.44	11.45	12.19	12.17	12.18	12.32	12.31	12.31
24	10.93	10.91	10.91	11.56	11.48	11.52	12.30	12.18	12.24	12.31	12.26	12.28
25	11.01	10.97	11.00	11.47	11.45	11.46	12.27	12.26	12.26	12.35	12.28	12.30
26	11.01	11.00	11.01	11.65	11.40	11.46	12.26	12.07	12.18	12.39	12.30	12.34
27	11.06	11.02	11.04	11.70	11.66	11.67	12.13	12.11	12.13	12.38	12.30	12.33
28	11.22	11.07	11.16	11.79	11.69	11.73	12.13	12.13	12.13	12.30	12.21	12.26
29	11.22	11.14	11.17	11.84	11.79	11.82	12.13	12.13	12.13	12.36	12.26	12.30
30	11.30	11.18	11.22	11.89	11.85	11.87	12.13	12.13	12.13	12.36	12.29	12.31
31	11.33	11.20	11.25	---	---	---	12.15	12.13	12.14	12.29	12.25	12.28
MONTH	11.33	10.28	10.66	11.89	11.11	11.39	12.37	11.83	12.14	12.39	12.06	12.20

## 07027000 REELFOOT LAKE NEAR TIPTONVILLE, TN--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	12.25	12.19	12.23	12.12	12.09	12.10	12.04	11.94	11.99	12.23	12.13	12.19
2	12.46	12.23	12.31	12.09	11.97	12.05	12.04	12.01	12.02	12.24	12.20	12.21
3	12.66	12.47	12.54	12.13	12.08	12.11	12.01	11.93	11.98	12.21	12.15	12.18
4	12.90	12.67	12.79	12.13	12.11	12.11	12.04	11.92	11.97	12.15	12.12	12.13
5	13.03	12.90	12.97	12.12	11.99	12.07	12.06	12.00	12.03	12.11	12.00	12.06
6	13.11	12.95	13.03	12.12	12.09	12.10	12.07	12.04	12.05	12.07	11.98	12.04
7	13.03	12.99	13.01	12.20	12.09	12.16	12.17	12.07	12.12	12.06	12.04	12.05
8	13.06	13.03	13.05	12.17	12.06	12.11	12.35	12.22	12.30	12.07	12.06	12.06
9	13.03	13.01	13.02	12.05	11.96	12.00	12.34	12.28	12.30	12.16	12.06	12.08
10	13.04	12.96	13.01	12.06	11.73	11.94	12.30	12.28	12.29	12.17	12.09	12.11
11	12.96	12.83	12.89	12.22	12.07	12.10	12.28	12.25	12.26	12.17	12.13	12.15
12	12.83	12.74	12.78	12.36	12.03	12.23	12.25	12.23	12.24	12.17	12.15	12.16
13	12.73	12.64	12.69	12.36	12.28	12.32	12.23	12.21	12.22	12.17	12.13	12.15
14	12.68	12.62	12.65	12.44	12.36	12.41	12.20	12.10	12.16	12.30	12.12	12.16
15	12.68	12.58	12.63	12.44	12.39	12.40	12.22	12.14	12.16	12.41	12.25	12.34
16	12.57	12.48	12.52	12.44	12.37	12.40	12.23	12.20	12.21	12.57	12.43	12.49
17	12.57	12.50	12.54	12.37	12.29	12.33	12.22	12.20	12.21	12.63	12.56	12.58
18	12.57	12.57	12.57	12.29	12.17	12.25	12.21	12.19	12.19	12.87	12.66	12.79
19	12.58	12.56	12.57	12.35	12.23	12.28	12.22	12.19	12.20	12.90	12.86	12.88
20	12.56	12.49	12.52	12.40	12.31	12.37	12.29	12.19	12.24	12.86	12.79	12.84
21	12.53	12.47	12.51	12.36	12.26	12.30	12.31	12.23	12.26	12.78	12.68	12.74
22	12.47	12.37	12.42	12.25	12.16	12.20	12.30	12.24	12.27	12.67	12.57	12.61
23	12.37	12.28	12.33	12.16	12.11	12.14	12.24	12.21	12.22	12.57	12.43	12.52
24	12.35	12.28	12.30	12.14	12.09	12.11	12.21	12.17	12.19	12.55	12.46	12.51
25	12.28	12.20	12.24	12.09	12.00	12.04	12.18	12.15	12.17	12.54	12.53	12.54
26	12.19	12.10	12.14	12.02	11.95	11.99	12.18	12.16	12.17	12.64	12.55	12.62
27	12.23	12.12	12.16	12.05	12.00	12.02	12.18	12.12	12.16	12.66	12.63	12.65
28	12.21	12.13	12.17	12.02	12.00	12.00	12.16	12.08	12.12	12.62	12.55	12.59
29	---	---	---	12.00	11.96	11.98	12.17	12.15	12.16	12.55	12.45	12.50
30	---	---	---	12.00	11.99	11.99	12.16	12.09	12.13	12.45	12.37	12.40
31	---	---	---	12.00	11.97	11.99	---	---	---	12.37	12.31	12.34
MONTH	13.11	12.10	12.59	12.44	11.73	12.15	12.35	11.92	12.17	12.90	11.98	12.38
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	12.31	12.22	12.27	11.95	11.82	11.91	11.50	11.47	11.48	10.90	10.89	10.90
2	12.25	12.22	12.23	11.97	11.90	11.95	11.47	11.41	11.43	10.89	10.88	10.89
3	12.22	12.19	12.20	11.95	11.93	11.94	11.44	11.41	11.42	10.88	10.87	10.88
4	12.25	12.21	12.23	11.93	11.87	11.89	11.40	11.37	11.39	10.91	10.87	10.89
5	12.26	12.21	12.25	11.87	11.84	11.85	11.36	11.33	11.35	10.93	10.90	10.91
6	12.26	12.23	12.25	11.84	11.83	11.83	11.33	11.26	11.29	10.91	10.89	10.90
7	12.28	12.22	12.25	11.83	11.81	11.82	11.28	11.22	11.26	10.94	10.88	10.91
8	12.42	12.28	12.31	11.81	11.77	11.79	11.27	11.24	11.25	10.89	10.84	10.86
9	12.52	12.34	12.43	11.77	11.71	11.75	11.26	11.24	11.26	10.84	10.80	10.82
10	12.58	12.49	12.51	11.73	11.65	11.70	11.27	11.20	11.23	10.80	10.73	10.76
11	12.59	12.55	12.58	11.69	11.58	11.65	11.27	11.25	11.26	10.81	10.65	10.72
12	12.60	12.58	12.59	11.68	11.52	11.64	11.25	11.23	11.24	10.84	10.81	10.82
13	12.59	12.57	12.57	11.70	11.66	11.68	11.23	11.19	11.21	10.83	10.82	10.83
14	12.57	12.53	12.55	11.74	11.67	11.70	11.19	11.13	11.16	10.82	10.79	10.81
15	12.53	12.46	12.48	11.79	11.74	11.75	11.16	11.10	11.14	10.79	10.75	10.78
16	12.46	12.40	12.42	11.74	11.72	11.73	11.19	11.12	11.17	10.79	10.78	10.78
17	12.39	12.35	12.38	11.72	11.71	11.72	11.21	11.19	11.20	10.82	10.66	10.76
18	12.35	12.26	12.30	11.71	11.68	11.70	11.22	11.19	11.20	10.93	10.75	10.79
19	12.26	12.20	12.23	11.68	11.66	11.67	11.20	11.18	11.19	10.82	10.79	10.81
20	12.20	12.17	12.19	11.69	11.65	11.67	11.18	11.15	11.17	10.81	10.79	10.80
21	12.17	12.15	12.16	11.66	11.63	11.65	11.15	11.13	11.14	10.81	10.80	10.81
22	12.15	12.11	12.13	11.62	11.60	11.61	11.13	11.08	11.10	10.80	10.77	10.79
23	12.15	12.10	12.12	11.60	11.57	11.58	11.08	11.05	11.06	10.78	10.73	10.76
24	12.12	12.10	12.12	11.57	11.53	11.56	11.11	11.07	11.08	10.76	10.71	10.74
25	12.12	12.08	12.10	11.53	11.49	11.51	11.07	11.03	11.05	10.74	10.68	10.72
26	12.14	12.05	12.06	11.66	11.46	11.50	11.03	11.01	11.02	10.72	10.68	10.71
27	12.05	11.95	12.01	11.58	11.54	11.56	11.09	11.01	11.04	10.72	10.66	10.69
28	12.02	11.99	12.01	11.56	11.52	11.54	11.08	11.00	11.05	10.70	10.68	10.69
29	12.01	12.00	12.01	11.75	11.53	11.56	11.00	10.96	10.98	10.69	10.57	10.65
30	12.00	11.95	11.97	11.53	11.50	11.52	10.95	10.91	10.94	10.65	10.57	10.63
31	---	---	---	11.51	11.46	11.49	10.91	10.90	10.91	---	---	---
MONTH	12.60	11.95	12.26	11.97	11.46	11.69	11.50	10.90	11.18	10.94	10.57	10.79

## OBION RIVER BASIN

07027010 RUNNING REELFOOT BAYOU NEAR OWL CITY, TN

LOCATION.--Lat 36°19'53", long 89°24'02", Obion County, Hydrologic Unit 08010202, at bridge on county road, 1.5 mi downstream of the spillway at Reelfoot Lake, and 1.6 mi east of Owl City.

DRAINAGE AREA.--247 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1982 to October 1983, April 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 264.96 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records poor. Flow is regulated by a spillway located 1.5 mi upstream of gage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,940 ft<sup>3</sup>/s, May 18, 1983, gage height 17.97 ft; no flow part of each day September 15-16, 1984, due to construction work in channel.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 1,680 ft<sup>3</sup>/s, June 9, gage height, 16.40 ft; minimum 0.75 ft<sup>3</sup>/s, Oct. 2, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	.83	9.1	25	41	176	129	4.6	4.5	577	5.4	4.5	3.0	
2	.81	7.0	9.7	40	364	29	4.3	5.7	620	5.8	4.5	3.0	
3	1.0	6.3	8.6	39	700	22	4.0	4.5	301	5.6	3.8	3.0	
4	.90	6.3	8.1	34	1090	17	3.8	4.0	97	5.6	3.8	3.0	
5	.98	6.4	7.5	33	1060	16	7.0	3.4	217	5.8	3.3	2.8	
6	.93	6.3	7.5	28	1090	15	5.2	2.8	226	5.8	3.3	3.0	
7	.99	6.3	7.0	23	1050	13	30	6.1	209	5.8	3.4	2.8	
8	1.4	6.1	7.0	14	1060	20	523	7.0	245	5.8	3.3	2.7	
9	1.3	6.1	6.1	15	1030	16	503	7.4	888	5.6	3.3	2.8	
10	1.6	5.8	5.6	15	1030	13	478	9.0	1390	5.6	3.0	2.6	
11	1.6	7.3	19	15	961	12	396	17	1390	5.8	3.1	2.7	
12	2.0	6.8	12	14	858	509	331	19	1350	5.8	2.8	11	
13	2.4	7.3	19	15	800	657	320	16	1100	5.6	2.8	6.4	
14	41	5.6	15	14	815	690	142	16	725	6.6	3.0	3.6	
15	13	5.8	9.8	13	811	684	8.0	429	666	7.2	3.0	3.3	
16	2.6	62	10	13	772	680	9.3	715	631	5.8	3.0	2.3	
17	2.6	6.5	33	14	762	642	8.6	764	607	5.8	2.7	3.6	
18	2.8	6.5	72	39	753	652	7.8	1080	565	5.8	3.0	31	
19	3.0	6.1	61	58	739	656	7.5	1180	461	5.6	2.8	11	
20	33	6.5	92	22	707	661	14	1400	231	5.6	3.0	3.2	
21	7.9	6.5	129	19	705	624	16	1410	32	5.5	2.6	3.0	
22	4.7	6.8	129	34	654	561	30	1380	29	5.6	2.9	2.7	
23	249	6.8	129	32	605	522	73	1250	25	6.1	3.1	2.3	
24	98	6.5	128	26	587	508	36	799	11	7.3	3.7	2.2	
25	6.6	6.5	103	30	551	472	6.1	743	7.0	7.5	3.7	2.2	
26	5.1	6.3	103	49	501	436	5.5	854	6.3	8.3	3.0	2.2	
27	6.3	82	147	62	350	220	4.3	1010	7.7	12	3.7	2.2	
28	7.4	19	161	18	165	7.4	3.8	1270	7.1	6.8	3.5	2.3	
29	7.1	13	50	23	---	6.8	3.5	1270	9.8	6.3	3.3	2.1	
30	7.2	9.4	42	28	---	6.5	3.3	1120	8.0	5.4	3.1	2.1	
31	34	---	42	46	---	5.6	---	652	---	4.5	3.0	---	
TOTAL	548.04	348.9	1597.9	866	20746	9502.3	2988.6	17448.4	12638.9	191.7	101.0	130.1	
MEAN	17.7	11.6	51.5	27.9	741	307	99.6	563	421	6.18	3.26	4.34	
MAX	249	82	161	62	1090	690	523	1410	1390	12	4.5	31	
MIN	.81	5.6	5.6	13	165	5.6	3.3	2.8	6.3	4.5	2.6	2.1	
CFSM	.07	.05	.21	.11	3.00	1.24	.40	2.28	1.70	.03	.01	.02	
IN.	.08	.05	.24	.13	3.12	1.43	.45	2.63	1.90	.03	.02	.02	
CAL YR 1985	TOTAL	108805.94		MEAN	298	MAX	1660	MIN	.81	CFSM	1.21	IN.	16.39
WTR YR 1986	TOTAL	67107.84		MEAN	184	MAX	1410	MIN	.81	CFSM	.74	IN.	10.11



## HATCHIE RIVER BASIN

201

07029500 HATCHIE RIVER AT BOLIVAR, TN  
(National stream-quality accounting network station)

LOCATION.--Lat 35°16'31", long 88°58'36", Hardeman County, Hydrologic Unit 08010208, on left bank 25 ft upstream of bridge on State Highway 18, 250 ft upstream from Illinois Central Gulf Railroad bridge, 0.6 mi downstream from Spring Creek, 1.5 mi northeast of Bolivar, and at mile 135.1.

DRAINAGE AREA.--1,480 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1929 to current year.

GAGE.--Water-stage recorder. Datum of gage is 323.49 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-8. Records good.

AVERAGE DISCHARGE.--57 years, 2,410 ft<sup>3</sup>/s, 22.11 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,600 ft<sup>3</sup>/s, Mar. 18, 1973, gage height, 21.66 ft from rating curve extended above 34,000 ft<sup>3</sup>/s; minimum, 78 ft<sup>3</sup>/s, Sept. 2, 1943.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
June 13	1300	*7,340	*15.03				

Minimum discharge, 132 ft<sup>3</sup>/s, Aug. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	600	1280	2690	787	590	2060	1160	404	2280	739	176	596	
2	800	1640	2720	834	592	1510	1000	429	2450	817	172	506	
3	750	1780	2840	854	627	1210	923	416	2620	914	148	417	
4	700	1700	2820	827	639	1090	886	406	2650	853	150	394	
5	650	1560	2630	764	625	1020	973	384	3030	739	140	371	
6	600	1420	2410	718	701	956	1090	362	3380	590	139	333	
7	550	1270	2110	686	926	902	996	353	4210	489	144	372	
8	506	1120	1740	652	1150	857	895	351	4640	423	171	362	
9	483	993	1470	629	1070	849	857	340	5070	379	207	318	
10	449	899	1290	623	954	808	831	352	5290	355	291	276	
11	440	790	1150	629	911	786	774	415	6430	333	376	245	
12	441	738	1340	633	870	840	699	559	6870	311	350	270	
13	423	732	1460	636	833	1450	667	858	7100	296	326	292	
14	424	701	1520	636	1030	2070	628	916	7090	297	316	318	
15	662	670	1480	632	1410	2350	625	696	6750	395	306	302	
16	885	676	1340	632	1700	2450	608	527	6470	503	274	252	
17	1030	878	1180	620	1740	2510	590	451	6090	614	283	220	
18	923	1360	1070	622	1840	2660	569	421	5520	541	315	197	
19	803	2010	1010	710	2200	3900	546	427	5060	443	421	246	
20	822	2390	926	875	2460	4150	569	442	4340	371	372	313	
21	763	2600	871	988	2610	4040	630	509	3280	323	303	382	
22	744	2630	845	933	2850	3580	683	582	1940	295	256	325	
23	982	2700	845	825	3160	3440	662	658	1130	271	238	293	
24	1320	2430	867	753	3460	3600	605	709	755	247	208	261	
25	1570	1900	879	703	3650	3780	553	752	635	231	196	219	
26	1670	1460	811	681	3800	3810	516	885	558	217	195	195	
27	1460	1530	775	655	3650	4100	487	1010	496	276	213	180	
28	1170	2670	744	608	2920	3880	464	1180	462	263	226	172	
29	1030	3090	736	595	---	3010	435	1550	507	229	240	176	
30	974	3090	750	582	---	2040	410	1930	534	211	485	169	
31	1060	---	749	590	---	1480	---	2150	---	196	613	---	
TOTAL	25684	48707	44068	21912	48968	71188	21331	21424	107637	13161	8250	8972	
MEAN	829	1624	1422	707	1749	2296	711	691	3588	425	266	299	
MAX	1670	3090	2840	988	3800	4150	1160	2150	7100	914	613	596	
MIN	423	670	736	582	590	786	410	340	462	196	139	169	
CFSM	.56	1.10	.96	.48	1.18	1.55	.48	.47	2.42	.29	.18	.20	
IN.	.65	1.22	1.11	.55	1.23	1.79	.54	.54	2.71	.33	.21	.23	
CAL YR 1985	TOTAL	683225		MEAN	1872	MAX	7090	MIN	323	CFSM	1.26	IN.	17.17
WTR YR 1986	TOTAL	441302		MEAN	1209	MAX	7100	MIN	139	CFSM	.82	IN.	11.09

## HATCHIE RIVER BASIN

07029500 HATCHIE RIVER AT BOLIVAR, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964, 1968, 1977 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1980 to September 1982, October 1983 to September 1986 (discontinued).

WATER TEMPERATURE: June 1980 to September 1986 (discontinued).

INSTRUMENTATION.--Water-quality monitor June 1980 to September 1986.

REMARKS.--Interruptions in the record were due to malfunctions of the instruments. Unpublished records of miscellaneous specific conductance and temperature are available in files of Subdistrict office. The water-quality monitor does not register below 0.0°C, monitor readings of 0.0°C may indicate lower temperatures.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 380 microsiemens, Sept. 5, 6, 1985; minimum, 28 microsiemens, Apr. 18, 1982.

WATER TEMPERATURE: Maximum, 31.5°C, July 15, 16, 1980; minimum recorded, 0.0°C, Dec. 23, 1983 to Jan. 3, 1984, several days in 1985, minimum observed, -0.5°C, Jan. 3, 1984.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 221 microsiemens, May 16; minimum, 69 microsiemens, July 4.

WATER TEMPERATURE: Maximum, not recorded; minimum, 1.0°C, Dec. 29, 30.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 08...	1145	508	--	7.00	14.0	760	17	8.8	--	26
JAN 15...	1230	634	110	6.80	3.0	762	8.9	12.8	95	120
APR 24...	1050	612	135	7.05	14.5	762	16	8.5	83	K60
JUL 23...	1115	272	158	7.25	28.0	760	34	--	--	63

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WH WAT TOTAL FIELD MG/L AS CACO3
OCT 08...	80	21	4	5.9	1.4	7.7	42	0.8	2.1	--
JAN 15...	2800	22	2	6.2	1.6	6.7	38	0.6	1.3	--
APR 24...	K32	23	1	6.2	1.7	9.3	45	0.9	1.5	22
JUL 23...	87	24	0	6.8	1.7	8.7	42	0.8	2.0	28

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
OCT 08...	3.3	6.6	9.7	<0.1	9.0	62	54	0.08	85	0.02
JAN 15...	6.1	8.4	8.8	<0.1	9.7	60	56	0.08	103	0.01
APR 24...	3.8	11	9.9	<0.1	9.3	65	64	0.09	107	<0.01
JUL 23...	3.0	8.6	9.2	<0.1	9.2	64	64	0.09	47	0.01

K--Results based on non-ideal colony count.

## HATCHIE RIVER BASIN

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07029500 HATCHIE RIVER AT BOLIVAR, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 08...	0.25	0.55	0.57	1.6	0.07	0.05	0.06	36	49	69
JAN 15...	0.21	0.56	0.55	3.7	0.05	0.02	0.02	13	22	59
APR 24...	0.23	0.79	0.79	1.1	0.08	0.02	0.01	55	91	91
JUL 23...	0.34	0.57	0.54	1.7	0.09	0.02	0.01	66	48	69

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 08...	70	<1	29	<0.5	<1	4	<3	5	450	7
JAN 15...	20	<1	25	<0.5	<1	<1	<3	5	52	<5
APR 24...	230	<1	32	<0.5	1	7	<3	3	800	<5

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 08...	4	110	<0.1	<10	12	<1	<1	56	<6	14
JAN 15...	<4	150	<0.1	<10	4	<1	<1	62	<6	37
APR 24...	<4	220	<0.1	<10	1	<1	<1	60	<6	16

## HATCHIE RIVER BASIN

07029500 HATCHIE RIVER AT BOLIVAR, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	94	85	90	126	118	121	105	103	104	126	110	112
2	118	102	107	130	112	120	106	104	105	126	108	112
3	131	109	115	113	108	111	106	104	105	123	108	110
4	122	118	120	109	108	108	105	105	105	120	108	109
5	121	118	120	119	109	110	106	105	105	109	108	109
6	134	120	124	112	111	112	106	105	106	109	108	108
7	134	124	127	114	113	113	106	105	106	109	108	108
8	161	124	149	129	115	117	107	105	106	109	108	108
9	166	151	154	123	117	118	120	105	107	121	108	109
10	170	157	160	125	113	116	121	106	109	123	108	110
11	175	163	166	114	112	113	108	107	107	123	109	112
12	175	171	173	115	109	112	110	108	109	124	109	112
13	---	---	---	116	110	114	113	110	111	118	109	110
14	---	---	---	121	115	118	114	113	113	123	109	112
15	142	132	139	123	119	121	113	108	110	124	109	112
16	145	126	137	126	123	124	109	108	109	124	109	112
17	127	118	122	124	113	119	109	108	108	125	109	113
18	121	118	120	117	107	110	110	109	109	125	110	114
19	121	97	106	118	107	109	110	109	109	113	110	111
20	98	94	96	113	109	112	111	109	110	127	109	114
21	96	93	94	113	111	112	111	109	110	126	108	114
22	100	95	98	112	111	111	111	109	110	111	109	110
23	120	100	108	112	111	112	115	109	110	124	109	111
24	123	118	121	113	112	113	111	109	110	124	109	113
25	124	118	122	114	112	113	111	109	110	125	110	112
26	120	104	111	125	113	114	111	110	111	113	110	111
27	107	104	106	139	114	127	125	110	112	113	110	111
28	107	106	107	138	110	128	112	110	111	113	111	112
29	111	107	108	108	96	100	113	110	111	125	111	115
30	113	109	110	117	98	104	126	110	112	125	110	113
31	117	113	115	---	---	---	113	111	112	126	110	112
MONTH	175	85	122	139	96	114	126	103	109	127	108	111
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	129	111	117	118	100	101	130	111	120	126	122	124
2	128	111	119	117	99	105	137	116	126	148	126	134
3	131	113	122	115	98	102	145	122	134	152	131	141
4	134	117	124	99	97	98	143	119	133	135	119	127
5	138	118	126	116	98	103	135	120	122	134	117	123
6	131	122	126	116	98	102	133	112	122	---	---	---
7	135	127	131	101	99	100	127	113	117	---	---	---
8	138	125	131	116	98	104	135	115	121	---	---	---
9	125	122	124	112	87	99	133	125	128	---	---	---
10	126	122	124	99	84	90	154	133	139	---	---	---
11	123	121	122	103	85	93	167	141	151	---	---	---
12	123	122	122	97	89	91	152	123	141	128	115	120
13	124	122	123	144	95	117	135	116	125	144	117	130
14	121	118	119	127	109	113	119	116	117	150	128	138
15	137	115	119	128	105	114	127	120	123	203	131	164
16	117	101	106	121	104	109	132	127	129	221	192	202
17	116	96	103	122	99	109	151	132	137	---	---	---
18	111	91	100	104	101	102	163	139	148	---	---	---
19	118	96	105	108	105	107	153	125	142	---	---	---
20	119	102	108	114	107	110	126	123	125	---	---	---
21	103	102	102	113	109	110	137	122	125	---	---	---
22	103	101	102	128	111	115	139	124	126	---	---	---
23	117	100	104	129	109	118	145	128	132	---	---	---
24	101	100	100	126	100	114	149	130	138	---	---	---
25	117	100	103	126	104	114	162	135	148	---	---	---
26	117	99	105	133	112	119	152	125	142	---	---	---
27	101	100	100	136	116	122	138	121	129	---	---	---
28	102	100	100	136	119	125	136	121	125	---	---	---
29	---	---	---	133	111	122	142	121	128	---	---	---
30	---	---	---	129	110	118	143	123	133	---	---	---
31	---	---	---	127	110	117	---	---	---	---	---	---
MONTH	138	91	114	144	84	108	167	111	131	---	---	---



## 07029500 HATCHIE RIVER AT BOLIVAR, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	85	75	78						
2	---	---	---	82	73	76						
3	---	---	---	83	74	76						
4	---	---	---	80	69	75						
5	---	---	---	80	71	74						
6	---	---	---	81	71	75						
7	---	---	---	87	75	79						
8	---	---	---	---	---	---						
9	---	---	---	---	---	---						
10	---	---	---	---	---	---						
11	120	105	111	---	---	---						
12	118	100	109	---	---	---						
13	111	97	103	---	---	---						
14	110	95	100	---	---	---						
15	113	95	103	---	---	---						
16	115	96	105	199	167	188						
17	119	99	108	179	155	167						
18	116	100	105	176	153	156						
19	118	99	105	---	---	---						
20	119	100	106	---	---	---						
21	118	100	108	---	---	---						
22	115	99	104	---	---	---						
23	118	98	103	---	---	---						
24	111	95	100	---	---	---						
25	109	92	96	---	---	---						
26	104	88	91	---	---	---						
27	104	87	92	---	---	---						
28	88	85	87	---	---	---						
29	98	83	88	---	---	---						
30	92	79	81	---	---	---						
31	---	---	---	---	---	---						
MONTH	---	---	---	---	---	---						

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	17.0	16.0	16.5	17.5	16.5	17.0	14.0	12.0	13.5	3.0	2.5	2.5
2	16.0	15.0	15.5	16.5	16.0	16.0	12.0	9.0	10.0	3.5	2.0	3.0
3	16.0	15.5	15.5	16.0	15.0	15.5	9.0	7.5	8.0	4.0	3.0	3.5
4	16.5	15.0	15.5	15.0	14.0	14.5	8.0	7.5	8.0	4.5	3.5	4.0
5	16.0	15.0	15.5	13.5	12.5	13.0	7.5	7.0	7.5	4.0	3.5	3.5
6	15.5	14.0	14.5	12.5	12.0	12.0	7.0	6.0	6.5	3.5	2.5	3.0
7	15.0	13.5	14.5	12.5	11.5	12.0	6.5	5.5	6.0	4.0	3.0	3.5
8	16.0	14.0	15.5	11.5	10.5	11.0	7.0	6.5	7.0	3.0	2.5	2.5
9	16.5	14.5	15.5	11.5	11.0	11.0	7.5	6.5	7.0	2.5	2.0	2.0
10	18.0	15.5	16.5	13.0	11.5	12.5	8.5	7.5	8.0	3.0	2.0	2.5
11	19.0	16.5	17.5	14.0	13.0	13.5	10.0	8.5	9.5	3.0	2.0	2.5
12	19.5	17.0	18.0	15.0	13.5	14.5	10.0	9.0	9.5	3.5	2.5	3.0
13	---	---	---	16.0	15.0	15.5	9.0	7.5	8.5	3.5	2.5	3.0
14	---	---	---	17.0	16.0	16.5	7.5	5.5	6.5	3.5	2.5	3.0
15	20.5	19.5	20.0	17.5	16.5	17.0	5.5	4.5	5.0	4.0	3.0	3.5
16	20.0	19.0	19.5	17.5	16.5	17.0	4.5	4.0	4.0	4.5	3.0	4.0
17	19.5	18.5	19.0	16.5	16.0	16.5	4.0	3.5	3.5	5.5	4.5	5.0
18	20.0	19.5	19.5	17.0	16.0	16.5	3.5	2.5	3.0	6.5	5.5	6.0
19	20.0	19.5	20.0	17.0	16.5	16.5	2.5	2.0	2.0	7.0	6.5	6.5
20	20.5	19.5	20.0	16.5	15.0	15.5	2.5	1.5	2.0	7.5	6.0	6.5
21	20.5	20.0	20.0	14.5	14.0	14.0	1.5	1.5	1.5	8.0	7.0	7.5
22	20.0	19.5	20.0	14.0	13.5	14.0	2.5	1.5	2.0	8.5	7.5	8.0
23	20.0	19.5	19.5	13.0	12.0	12.5	3.5	2.5	3.0	7.5	7.0	7.5
24	20.5	19.5	20.0	12.5	12.5	12.5	3.5	3.0	3.0	7.5	6.5	7.0
25	20.0	19.5	20.0	13.0	12.5	12.5	2.5	1.5	2.0	8.0	7.0	7.5
26	19.0	18.5	19.0	14.5	13.0	13.5	2.0	1.5	1.5	7.5	6.0	7.0
27	19.0	19.0	19.0	16.0	15.0	15.5	2.5	1.5	2.0	5.5	3.5	4.5
28	18.5	18.5	18.5	16.0	14.0	15.0	2.0	1.5	2.0	4.0	3.0	3.5
29	18.5	18.0	18.5	13.5	13.5	13.5	2.0	1.0	1.5	4.5	3.5	4.0
30	18.0	17.5	18.0	14.5	13.5	14.0	2.0	1.0	1.5	4.0	3.0	4.0
31	17.5	17.0	17.5	---	---	---	3.5	2.0	2.5	4.5	3.0	4.0
MONTH	20.5	13.5	18.0	17.5	10.5	14.5	14.0	1.0	5.0	8.5	2.0	4.5

## HATCHIE RIVER BASIN

07029500 HATCHIE RIVER AT BOLIVAR, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	6.0	4.0	5.0	9.0	7.5	8.0	18.0	16.5	17.0	21.0	20.0	20.5
2	8.0	6.0	7.0	9.5	7.5	8.5	18.5	17.0	18.0	21.0	19.0	20.0
3	10.0	8.0	9.0	9.5	8.5	9.0	19.5	18.0	19.0	20.5	18.0	19.0
4	11.5	10.0	11.0	9.0	8.0	8.5	20.0	18.5	19.0	20.5	17.5	19.0
5	13.0	11.5	12.0	9.0	7.5	8.0	19.5	19.0	19.0	24.0	17.5	20.0
6	13.0	12.0	12.5	10.0	8.5	9.0	20.5	18.5	19.5	---	---	---
7	12.0	11.0	11.5	10.0	8.5	9.0	21.0	19.5	20.0	---	---	---
8	11.0	10.5	11.0	9.5	8.5	9.0	21.0	19.5	20.5	---	---	---
9	10.5	9.0	10.0	11.5	9.0	10.0	20.0	18.5	19.0	---	---	---
10	9.0	6.5	8.0	13.5	11.0	12.0	19.0	17.5	18.0	---	---	---
11	6.0	5.0	5.5	13.5	12.0	13.0	19.0	16.5	17.5	---	---	---
12	5.0	3.5	4.5	14.0	13.5	14.0	18.5	17.0	17.5	23.0	21.5	22.0
13	3.5	3.0	3.5	14.5	13.5	14.0	19.0	16.5	18.0	23.5	22.0	22.5
14	3.0	2.5	3.0	14.5	14.0	14.0	18.0	17.0	17.5	24.0	22.5	23.0
15	3.5	2.0	2.5	15.0	13.5	14.0	17.5	16.0	16.5	23.0	22.5	22.5
16	5.0	3.0	4.0	15.5	13.5	14.5	16.0	14.5	15.5	24.0	22.0	23.0
17	7.5	5.5	6.5	15.5	13.5	14.5	16.0	13.5	14.5	---	---	---
18	10.0	7.5	9.0	15.5	14.5	15.0	17.0	14.5	15.5	---	---	---
19	13.0	10.0	11.5	15.5	13.5	14.5	17.0	15.0	16.0	---	---	---
20	14.0	12.0	13.0	13.5	11.0	12.5	17.0	16.0	16.5	23.0	18.5	21.0
21	13.5	11.5	12.5	11.0	8.5	9.5	16.0	15.0	15.5	22.0	20.0	21.0
22	11.5	10.5	11.0	11.5	8.0	9.5	16.0	14.5	15.0	20.5	18.5	19.5
23	11.0	9.5	10.0	12.5	9.0	10.5	16.0	14.0	15.0	19.0	18.0	18.5
24	10.5	9.0	10.0	14.5	10.5	12.5	17.0	14.0	15.5	19.5	18.5	19.0
25	9.5	7.5	8.5	16.0	12.0	14.0	18.5	15.0	16.5	20.0	18.5	19.5
26	11.0	8.0	9.5	16.5	13.5	15.0	19.0	16.5	18.0	20.5	19.5	20.0
27	11.0	10.0	10.5	17.0	14.5	16.0	19.5	17.0	18.5	21.5	19.5	20.5
28	10.0	8.5	9.0	17.0	13.5	15.5	20.5	18.5	19.5	22.0	21.0	21.5
29	---	---	---	17.0	14.0	15.5	21.0	18.5	19.5	22.5	21.5	22.0
30	---	---	---	17.0	15.0	16.0	22.0	19.0	20.5	22.5	21.5	22.0
31	---	---	---	17.5	16.0	17.0	---	---	---	---	---	---
MONTH	14.0	2.0	8.5	17.5	7.5	12.5	22.0	13.5	17.5	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	---	---	---	28.5	27.0	27.5						
2	---	---	---	27.5	26.5	27.0						
3	---	---	---	27.0	26.0	26.5						
4	---	---	---	27.0	26.0	26.5						
5	---	---	---	27.5	26.0	26.5						
6	---	---	---	28.0	26.0	27.0						
7	---	---	---	28.5	26.5	27.5						
8	---	---	---	---	---	---						
9	---	---	---	---	---	---						
10	---	---	---	---	---	---						
11	24.0	23.0	23.5	---	---	---						
12	24.5	23.5	24.0	---	---	---						
13	24.0	23.5	23.5	---	---	---						
14	24.0	23.0	23.5	---	---	---						
15	24.0	23.0	23.5	---	---	---						
16	25.0	23.5	24.0	29.0	27.0	28.0						
17	25.5	24.5	25.0	29.5	27.5	28.5						
18	25.0	23.5	24.0	29.5	28.0	28.5						
19	24.5	23.0	24.0	---	---	---						
20	25.0	23.5	24.5	---	---	---						
21	25.5	24.5	25.0	---	---	---						
22	26.5	25.0	25.5	---	---	---						
23	27.5	26.0	26.5	---	---	---						
24	28.0	26.5	27.0	---	---	---						
25	28.5	26.5	27.5	---	---	---						
26	28.5	26.5	27.5	---	---	---						
27	29.0	27.0	28.0	---	---	---						
28	28.5	27.0	27.5	---	---	---						
29	28.5	26.5	27.5	---	---	---						
30	28.5	26.5	27.5	---	---	---						
31	---	---	---	---	---	---						
MONTH	---	---	---	---	---	---						

## 07030100 CANE CREEK AT RIPLEY, TN

LOCATION.--Lat 35°45'25", long 89°33'05", Lauderdale County, Hydrologic Unit 08010208, on right bank, at bridge on State Highway 19, 1.3 miles upstream from Hyde Creek, 1.5 miles northwest of Ripley.

DRAINAGE AREA.--33.9 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1957 to September 1962. Annual maximum, water years 1963-70. October 1985 to September 1986.

GAGE.--Water-stage recorder. Datum of gage is 295.93 ft above National Geodetic Vertical Datum of 1929. Aug. 21, 1963 to Sept. 30, 1970, crest-stage gage at same site at datum 21.83 ft higher.

REMARKS.--Estimated daily discharges: Oct. 1-20, May 15-19, 22. Records good except for estimated daily discharges, which are poor. Natural flow affected by upstream discharge of Ripley sewage effluent.

AVERAGE DISCHARGE.--6 years, (water years 1958-62, 1986), 47.4 ft<sup>3</sup>/s, 18.99 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,590 ft<sup>3</sup>/s March 12, 1986, gage height, 22.06 ft; minimum 0.1 ft<sup>3</sup>/s May 19, 24-26, Sept. 25, 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 26	2245	2,740	17.02	May 22	1630	1,790	14.64
Dec. 11	0945	1,660	14.25	June 6	1030	2,120	15.53
Mar. 12	0300	*5,590	*22.06				

Minimum discharge, .91 ft<sup>3</sup>/s, Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	20	7.0	119	4.7	3.6	4.7	5.5	42	7.3	24	2.4	1.3	
2	8.0	4.1	18	4.2	3.1	4.6	5.2	8.1	6.7	4.8	2.0	1.7	
3	5.0	2.6	12	4.8	4.2	5.1	5.0	4.7	6.4	2.9	1.9	1.8	
4	4.0	2.4	9.1	3.6	12	4.5	4.4	3.7	50	2.3	2.0	2.1	
5	3.5	2.2	6.9	3.3	7.3	4.3	147	3.7	18	2.0	2.1	2.0	
6	3.0	2.2	5.6	3.0	42	4.5	33	3.1	377	1.9	2.1	1.6	
7	2.8	2.1	4.9	3.2	11	3.9	18	3.1	65	2.0	2.1	1.5	
8	2.6	2.2	4.4	2.8	9.0	3.3	155	2.7	39	1.9	2.3	1.6	
9	2.5	1.9	4.5	2.8	7.6	3.2	22	2.4	271	2.0	2.1	1.8	
10	2.4	1.5	4.7	3.3	7.7	3.8	26	38	226	2.3	1.7	1.8	
11	2.3	1.8	380	3.5	8.6	4.2	29	110	184	2.0	1.8	1.8	
12	2.3	2.9	58	3.1	8.6	1350	19	11	90	1.9	2.1	1.8	
13	2.2	3.3	31	3.7	8.4	118	14	7.6	31	1.7	2.0	1.6	
14	2.2	2.8	15	3.9	232	45	13	5.8	17	71	1.9	1.4	
15	3.5	3.8	12	3.7	69	29	10	4.3	12	14	1.8	1.4	
16	2.5	35	11	3.8	37	22	10	5.1	9.5	4.5	1.7	1.6	
17	2.3	3.0	9.5	4.1	26	18	11	4.4	9.0	4.1	1.8	1.7	
18	2.2	2.7	7.9	23	19	50	7.8	370	8.4	3.9	1.9	24	
19	2.2	2.4	6.2	14	16	28	6.0	23	7.1	3.5	2.0	8.0	
20	3.0	5.2	6.5	6.6	14	15	17	9.6	6.8	3.0	1.9	6.2	
21	2.4	3.3	4.5	5.6	11	13	11	10	6.2	3.2	1.8	3.5	
22	2.3	2.2	5.4	4.7	9.4	12	7.0	368	5.1	3.1	1.8	2.4	
23	105	2.1	5.9	4.7	8.7	11	6.4	54	5.4	3.3	1.8	2.3	
24	11	1.5	5.0	5.2	8.6	9.9	5.8	44	5.0	5.7	1.6	2.3	
25	4.1	4.8	3.3	5.1	7.8	9.6	5.2	24	4.7	7.4	1.8	2.3	
26	3.0	266	3.6	5.8	7.8	9.0	4.2	29	4.4	7.3	1.9	2.4	
27	2.6	537	5.4	6.2	11	8.7	3.5	17	4.4	70	1.9	2.3	
28	2.8	80	5.4	6.0	5.9	7.7	11	13	14	22	1.8	2.1	
29	3.0	28	5.3	4.6	---	6.4	4.9	11	4.8	7.7	1.8	2.1	
30	3.8	15	5.9	3.5	---	5.7	4.1	9.6	3.4	4.5	1.8	2.4	
31	15	---	6.7	3.6	---	5.7	---	8.1	---	3.0	1.4	---	
TOTAL	233.5	1031.0	782.6	160.1	616.3	1819.8	621.0	1250.0	1498.6	292.9	59.0	90.8	
MEAN	7.53	34.4	25.2	5.16	22.0	58.7	20.7	40.3	50.0	9.45	1.90	3.03	
MAX	105	537	380	23	232	1350	155	370	377	71	2.4	24	
MIN	2.2	1.5	3.3	2.8	3.1	3.2	3.5	2.4	3.4	1.7	1.4	1.3	
CFSM	.22	1.01	.74	.15	.65	1.73	.61	1.19	1.47	.28	.06	.09	
IN.	.26	1.13	.86	.18	.68	2.00	.68	1.37	1.64	.32	.06	.10	
WTR YR 1986	TOTAL	8455.6		MEAN	23.2	MAX	1350	MIN	1.3	CFSM	.68	IN.	9.28

HATCHIE RIVER BASIN  
07030100 CANE CREEK AT RIPLEY, TN--Continued  
WATER QUALITY RECORDS

PERIOD OF RECORD.--October 1985 to September 1986.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: October 1985 to September 1986.

INSTRUMENTATION.--Sediment pumping sampler October 1985 to September 1986.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,450 mg/L, March 12; minimum daily mean, 14 mg/L, November 12.

SEDIMENT LOADS: Maximum daily, 19,100 tons, March 12; minimum daily, .06 ton, November 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
OCT					APR				
30...	1425	5.7	>1000	17.0	02...	1430	5.6	750	21.5
NOV					05...	1130	376	120	16.5
05...	1310	2.7	800	14.5	05...	1430	180	122	18.0
14...	1500	3.2	1000	20.5	11...	1010	30	280	16.0
20...	1400	7.5	335	16.0	16...	1000	7.8	700	14.0
26...	1310	5.7	420	17.0	MAY				
27...	1050	719	100	13.5	01...	1015	11	750	20.5
27...	1320	448	125	14.0	01...	1305	198	240	20.0
27...	1425	513	125	14.0	06...	1215	3.4	760	23.0
27...	1530	513	125	14.0	13...	1045	8.5	520	23.5
DEC					21...	1600	11	420	22.0
02...	1310	18	240	5.0	22...	1625	1640	55	15.0
11...	1035	1510	120	12.0	23...	1510	39	200	19.0
11...	1420	476	120	12.0	24...	1700	120	160	22.0
17...	1440	9.6	555	6.0	28...	1050	18	380	23.0
23...	1145	5.8	560	5.5	JUN				
JAN					04...	1620	34	650	23.0
02...	1305	3.9	580	5.5	04...	1740	140	490	22.5
09...	1215	3.4	--	7.5	04...	1940	260	200	22.0
13...	1345	3.9	647	6.0	18...	1115	8.4	480	26.5
29...	1445	4.1	1100	7.0	26...	1200	4.8	1100	28.0
FEB					JUL				
04...	0945	14	1150	14.0	02...	1205	9.1	490	28.0
06...	1305	42	255	13.0	10...	1300	2.5	1050	31.0
12...	1410	9.5	950	4.0	25...	1255	7.3	420	31.0
18...	1420	19	420	13.0	31...	1230	3.2	710	32.0
27...	1055	7.6	710	12.0	AUG				
MAR					14...	1000	2.2	1090	25.5
06...	1150	4.8	999	11.0	27...	1130	2.1	1350	28.0
11...	1215	4.2	750	15.0	SEP				
12...	1300	311	110	12.5	12...	0840	1.8	1450	22.0
13...	1600	105	170	15.0	19...	1045	8.1	225	23.0
19...	1500	22	290	12.5	22...	1150	2.6	670	25.0
27...	1400	9.2	640	18.0	29...	1100	2.8	1600	26.0



## HATCHIE RIVER BASIN

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07030100 CANE CREEK AT RIPLEY, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	20	---	---	7.0	56	1.1	119	930	348
2	8.0	---	---	4.1	32	.35	18	217	11
3	5.0	---	---	2.6	24	.17	12	170	5.5
4	4.0	---	---	2.4	21	.14	9.1	155	3.8
5	3.5	---	---	2.2	30	.18	6.9	145	2.7
6	3.0	---	---	2.2	25	.15	5.6	125	1.9
7	2.8	---	---	2.1	22	.12	4.9	100	1.3
8	2.6	---	---	2.2	19	.11	4.4	72	.86
9	2.5	---	---	1.9	17	.09	4.5	51	.62
10	2.4	---	---	1.5	16	.06	4.7	41	.52
11	2.3	---	---	1.8	15	.07	380	1130	1830
12	2.3	---	---	2.9	14	.11	58	315	49
13	2.2	---	---	3.3	15	.13	31	280	23
14	2.2	---	---	2.8	15	.11	15	315	13
15	3.5	---	---	3.8	273	18	12	273	8.8
16	2.5	---	---	35	578	102	11	203	6.0
17	2.3	---	---	3.0	161	1.3	9.5	147	3.8
18	2.2	---	---	2.7	76	.55	7.9	130	2.8
19	2.2	---	---	2.4	46	.30	6.2	134	2.2
20	3.0	---	---	5.2	63	.88	6.5	127	2.2
21	2.4	---	---	3.3	55	.49	4.5	170	2.1
22	2.3	22	.14	2.2	36	.21	5.4	105	1.5
23	105	1340	1620	2.1	28	.16	5.9	69	1.1
24	11	298	8.9	1.5	32	.13	5.0	77	1.0
25	4.1	133	1.5	4.8	39	.51	3.3	68	.61
26	3.0	63	.51	266	763	2630	3.6	56	.54
27	2.6	28	.20	537	749	1270	5.4	57	.83
28	2.8	38	.29	80	344	74	5.4	55	.80
29	3.0	35	.28	28	343	26	5.3	48	.69
30	3.8	27	.28	15	322	13	5.9	48	.76
31	15	66	2.7	---	---	---	6.7	48	.87
TOTAL	233.5	---	---	1031.0	---	4140.42	782.6	---	2327.80
JANUARY			FEBRUARY			MARCH			
1	4.7	41	.52	3.6	46	.45	4.7	38	.48
2	4.2	36	.41	3.1	43	.36	4.6	45	.56
3	4.8	27	.35	4.2	43	.49	5.1	36	.50
4	3.6	28	.27	12	85	2.8	4.5	56	.68
5	3.3	29	.26	7.3	73	1.4	4.3	28	.33
6	3.0	27	.22	42	1130	234	4.5	22	.27
7	3.2	28	.24	11	109	3.2	3.9	20	.21
8	2.8	30	.23	9.0	40	.97	3.3	20	.18
9	2.8	36	.27	7.6	40	.82	3.2	23	.20
10	3.3	29	.26	7.7	36	.75	3.8	32	.33
11	3.5	32	.30	8.6	32	.74	4.2	27	.31
12	3.1	16	.13	8.6	28	.65	1350	3450	19100
13	3.7	21	.21	8.4	32	.73	118	1050	335
14	3.9	18	.19	232	1970	2020	45	504	61
15	3.7	27	.27	69	995	188	29	341	27
16	3.8	27	.28	37	350	35	22	248	15
17	4.1	35	.39	26	93	6.5	18	195	9.5
18	23	578	110	19	87	4.5	50	715	145
19	14	560	21	16	79	3.4	28	450	34
20	6.6	210	3.7	14	74	2.8	15	202	8.2
21	5.6	70	1.1	11	51	1.5	13	149	5.2
22	4.7	51	.65	9.4	38	.96	12	140	4.5
23	4.7	27	.34	8.7	38	.89	11	132	3.9
24	5.2	21	.29	8.6	34	.79	9.9	116	3.1
25	5.1	33	.45	7.8	31	.65	9.6	116	3.0
26	5.8	35	.55	7.8	31	.65	9.0	101	2.5
27	6.2	46	.77	11	124	3.7	8.7	87	2.0
28	6.0	62	1.0	5.9	38	.61	7.7	105	2.2
29	4.6	55	.68	---	---	---	6.4	102	1.8
30	3.5	38	.36	---	---	---	5.7	85	1.3
31	3.6	38	.37	---	---	---	5.7	96	1.5
TOTAL	160.1	---	146.06	616.3	---	2517.31	1819.8	---	19769.75

## HATCHIE RIVER BASIN

07030100 CANE CREEK AT RIPLEY, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	5.5	93	1.4	42	523	131	7.3	90	1.8
2	5.2	70	.98	8.1	210	4.6	6.7	50	.90
3	5.0	59	.80	4.7	105	1.3	6.4	50	.86
4	4.4	59	.70	3.7	75	.75	50	877	264
5	147	721	513	3.7	48	.48	18	1080	4.0
6	33	851	133	3.1	25	.21	377	2150	5770
7	18	675	33	3.1	20	.17	65	1460	344
8	155	975	772	2.7	21	.15	39	1080	114
9	22	140	8.3	2.4	19	.12	271	2310	2930
10	26	186	13	38	2530	938	226	1870	2230
11	29	186	15	110	2000	1340	184	1050	548
12	19	170	8.7	11	200	5.9	90	588	143
13	14	120	4.5	7.6	120	2.5	31	504	42
14	13	100	3.5	5.8	75	1.2	17	510	23
15	10	100	2.7	4.3	47	0.55	12	549	18
16	10	80	2.2	5.1	53	0.73	9.1	588	14
17	11	93	2.8	4.4	47	0.56	9.0	554	13
18	7.8	80	1.7	370	3900	7500	8.4	406	9.2
19	6.0	75	1.2	23	1100	68	7.1	224	4.3
20	17	175	8.0	9.6	910	24	6.8	168	3.1
21	11	110	3.3	10	420	11	6.2	101	1.7
22	7.0	52	.98	368	3150	6060	5.1	98	1.3
23	6.4	45	.78	54	525	77	5.4	94	1.4
24	5.8	40	.63	44	1240	220	5.0	63	.85
25	5.2	40	.56	24	696	45	4.7	53	.67
26	4.2	40	.45	29	522	41	4.4	42	.50
27	3.5	40	.38	17	464	21	4.4	42	.50
28	11	180	5.3	13	342	12	14	546	54
29	4.9	95	1.3	11	260	7.7	4.8	1090	14
30	4.1	72	.80	9.6	190	4.9	3.4	476	4.4
31	---	---	---	8.1	115	2.5	---	---	---
TOTAL	621.0	---	1540.96	1250.0	---	16522.32	1498.2	---	12556.48
JULY			AUGUST			SEPTEMBER			
1	24	2200	164	2.4	48	.31	1.3	23	.08
2	4.8	952	12	2.0	47	.25	1.7	23	.11
3	2.9	375	2.9	1.9	45	.23	1.8	27	.13
4	2.3	140	.87	2.0	45	.24	2.1	29	.16
5	2.0	90	.49	2.1	44	.25	2.0	28	.15
6	1.9	63	.32	2.1	41	.23	1.6	28	.12
7	2.0	53	.29	2.1	45	.26	1.5	27	.11
8	1.9	62	.32	2.3	49	.30	1.6	22	.10
9	2.0	84	.45	2.1	53	.30	1.8	21	.10
10	2.3	42	.26	1.7	55	.25	1.8	21	.10
11	2.0	40	.22	1.8	58	.28	1.8	20	.10
12	1.9	39	.20	2.1	65	.37	1.8	19	.09
13	1.7	40	.18	2.0	78	.42	1.6	19	.08
14	71	1670	2200	1.9	88	.45	1.4	20	.08
15	14	1760	94	1.8	82	.40	1.4	20	.08
16	4.5	468	5.7	1.7	76	.35	1.6	19	.08
17	4.1	97	1.1	1.8	71	.35	1.7	19	.09
18	3.9	73	.77	1.9	65	.33	24	396	139
19	3.5	49	.46	2.0	58	.31	8.0	400	8.6
20	3.0	46	.37	1.9	50	.26	6.2	270	4.5
21	3.2	49	.42	1.8	48	.23	3.5	110	1.0
22	3.1	49	.41	1.8	45	.22	2.4	40	.26
23	3.3	48	.43	1.8	41	.20	2.3	29	.18
24	5.7	74	1.1	1.6	38	.16	2.3	27	.17
25	7.4	68	1.4	1.8	32	.16	2.3	20	.12
26	7.3	200	3.9	1.9	28	.14	2.4	19	.12
27	70	1510	420	1.9	20	.10	2.3	19	.12
28	22	270	16	1.8	21	.10	2.1	19	.11
29	7.7	135	2.8	1.8	21	.10	2.1	17	.10
30	4.5	88	1.1	1.8	23	.11	2.4	17	.11
31	3.0	64	.52	1.4	22	.08	---	---	---
TOTAL	292.9	---	2932.98	59.0	---	7.74	90.8	---	156.15

## HATCHIE RIVER BASIN

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07030137 CANE CREEK AT THREE POINT, TN

LOCATION.--Lat 35°41'36", long 89°41'43", Lauderdale County, Hydrologic Unit 08010108, on left bank, at bridge on State Highway 87, 0.2 mile east of Three Point, and at mile 5.0.

DRAINAGE AREA.--79.8 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to September 1986.

GAGE.--Water-stage recorder. Datum of gage is 232.37 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-20, Nov. 27 to Dec. 2 and Dec. 11-17. Records poor. Flow affected by backwater from Hatchie River much of the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,950 ft<sup>3</sup>/s, March 12, 1986, gage height, 27.96 ft; minimum, 1.2 ft<sup>3</sup>/s, Sept. 26, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 27	0200	2,760	19.06	Mar. 12	Unknown	*6,950	*27.96
Dec. 11	1300	2,020	16.77				

Minimum discharge, 1.2 ft<sup>3</sup>/s, Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	35	16	245	8.4	5.8	9.5	9.2	36	9.7	55	8.2	2.2	
2	18	7.0	37	7.1	5.8	9.3	7.5	25	8.7	28	7.3	2.3	
3	12	4.9	20	7.7	5.8	9.2	8.1	8.5	8.5	17	6.0	2.7	
4	9.0	4.0	20	8.0	15	9.9	7.3	6.1	87	14	5.2	2.8	
5	8.0	3.8	16	6.7	16	11	368	5.1	101	12	4.7	3.7	
6	7.0	4.2	13	6.4	80	9.3	249	5.1	416	11	5.5	3.1	
7	6.5	4.5	11	6.7	22	12	142	4.8	192	8.9	5.5	2.7	
8	6.0	3.9	9.0	6.5	14	6.4	457	18	160	7.5	7.1	2.5	
9	5.8	4.0	8.5	5.6	11	6.0	94	7.3	478	6.7	6.2	2.7	
10	5.8	3.7	8.0	5.3	10	5.4	42	7.8	305	6.6	5.1	2.7	
11	5.6	3.3	861	5.7	11	6.3	40	183	465	6.5	4.2	3.1	
12	5.4	4.2	282	6.3	11	2490	28	19	256	6.0	4.1	3.3	
13	5.4	5.2	136	5.9	11	386	21	12	104	5.8	4.0	2.7	
14	5.4	5.1	102	6.5	115	111	19	8.5	37	5.3	3.3	2.3	
15	10	6.3	74	6.5	150	53	18	34	18	71	3.0	2.2	
16	6.0	67	49	6.3	90	31	12	13	15	10	3.0	2.0	
17	5.6	11	21	7.0	52	23	17	9.5	11	7.6	3.4	2.2	
18	5.4	6.7	9.4	11	37	66	13	619	10	7.0	2.8	3.5	
19	5.4	6.4	9.2	51	28	73	10	60	9.9	6.8	3.0	54	
20	8.0	8.1	8.4	11	22	24	22	31	9.7	6.8	2.8	9.9	
21	6.1	7.7	7.8	9.1	17	21	23	20	9.6	6.8	2.6	21	
22	5.3	4.9	7.5	8.0	12	28	13	460	9.4	6.7	2.6	4.5	
23	159	3.9	11	6.9	9.6	31	9.9	191	9.3	6.8	2.5	2.7	
24	62	3.0	9.9	6.8	8.2	29	8.7	141	9.2	6.8	2.5	2.1	
25	7.6	7.2	7.5	7.6	8.5	25	7.8	99	9.2	11	2.4	2.2	
26	4.9	163	6.3	7.3	10	19	6.8	71	9.2	11	2.6	1.4	
27	4.4	999	6.3	5.8	12	11	6.0	41	9.2	66	2.7	1.5	
28	4.0	170	7.2	5.6	11	11	14	22	32	40	2.2	1.7	
29	4.3	59	6.9	6.4	---	13	12	18	11	27	2.0	2.2	
30	6.0	32	6.6	6.3	---	14	6.3	14	6.1	17	2.0	2.1	
31	64	---	8.5	5.4	---	12	---	12	---	12	2.2	---	
TOTAL	502.9	1629.0	2025.0	260.8	800.7	3565.3	1691.6	2201.7	2815.7	510.6	120.7	154.0	
MEAN	16.2	54.3	65.3	8.41	28.6	115	56.4	71.0	93.9	16.5	3.89	5.13	
MAX	159	999	861	51	150	2490	457	619	478	71	8.2	54	
MIN	4.0	3.0	6.3	5.3	5.8	5.4	6.0	4.8	6.1	5.3	2.0	1.4	
CFSM	.20	.68	.82	.11	.36	1.44	.71	.89	1.18	.21	.05	.06	
IN.	.23	.76	.94	.12	.37	1.66	.79	1.03	1.31	.24	.06	.07	
WTR YR 1986	TOTAL	16278.0		MEAN	44.6	MAX	2490	MIN	1.4	CFSM	.56	IN.	7.59

## HATCHIE RIVER BASIN

07030137 CANE CREEK AT THREE POINT, TN--Continued

## WATER QUALITY RECORDS

PERIOD OF RECORD.--October 1985 to September 1986.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: October 1985 to September 1986.

INSTRUMENTATION.--Sediment pumping sampler October 1985 to September 1986.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 17,300 mg/L, June 6; minimum daily mean, 10 mg/L, January 6-7.

SEDIMENT LOADS: Maximum daily, 55,300 tons, March 12; minimum daily, .11 ton, September 15.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
OCT					APR				
30...	1225	6.4	400	16.5	02...	1240	7.4	445	19.5
NOV					05...	1240	726	240	17.0
05...	1050	3.9	500	11.0	05...	1525	587	145	17.0
14...	1610	5.3	700	20.0	11...	1245	49	400	18.0
20...	1605	7.6	--	15.0	16...	1130	13	420	14.5
26...	1155	21	600	14.5	MAY				
27...	1050	1360	100	14.0	01...	1105	7.2	240	22.5
DEC					06...	1035	5.4	380	22.5
03...	1600	20	200	4.5	13...	0910	6.8	240	22.5
11...	1245	1890	105	12.5	21...	1300	19	270	21.5
11...	1515	1250	105	12.5	22...	1810	766	170	17.0
17...	1215	21	373	3.0	23...	1410	112	140	18.0
20...	1500	8.4	488	2.5	28...	0915	23	280	23.5
23...	1340	12	580	5.0	JUN				
JAN					04...	2025	299	1800	23.0
02...	1230	7.6	680	2.5	13...	1415	88	160	27.0
09...	1300	5.7	520	2.0	18...	1355	10	290	31.0
13...	1130	6.2	510	3.5	26...	1430	9.2	540	31.5
29...	1255	7.0	710	5.0	JUL				
FEB					02...	1035	18	118	27.0
04...	0815	8.4	750	13.0	10...	1330	6.9	420	30.0
12...	1230	11	540	1.0	25...	1500	12	750	32.0
18...	1220	37	360	12.0	31...	1050	13	280	31.5
27...	1310	11	490	12.0	AUG				
MAR					14...	0900	2.5	930	25.0
11...	1055	6.8	760	13.5	27...	1050	2.5	860	27.5
12...	1530	943	103	12.0	SEP				
13...	1440	300	150	13.0	12...	0940	3.1	1000	22.5
19...	1210	55	215	13.5	19...	1000	66	480	23.0
21...	1140	19	342	8.0	22...	1110	3.4	220	24.0



## 07030137 CANE CREEK AT THREE POINT, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER				NOVEMBER			DECEMBER		
1	35	---	---	16	154	6.7	245	3200	2120
2	18	---	---	7.0	76	1.4	37	320	32
3	12	---	---	4.9	83	1.1	20	215	12
4	9.0	---	---	4.0	85	.92	20	200	11
5	8.0	---	---	3.8	70	.72	16	181	7.8
6	7.0	---	---	4.2	44	.50	13	175	6.1
7	6.5	---	---	4.5	49	.60	11	170	5.0
8	6.0	---	---	3.9	41	.43	9.0	162	3.9
9	5.8	---	---	4.0	38	.41	8.5	161	3.7
10	5.8	---	---	3.7	45	.45	8.0	161	3.5
11	5.6	---	---	3.3	36	.32	861	3620	12300
12	5.4	---	---	4.2	42	.48	282	3800	2890
13	5.4	---	---	5.2	50	.70	136	2600	955
14	5.4	---	---	5.1	36	.50	102	1650	454
15	10	---	---	6.3	52	.88	74	1100	220
16	6.0	---	---	67	1220	262	49	770	102
17	5.6	---	---	11	350	10	21	425	24
18	5.4	---	---	6.7	238	4.3	9.4	330	8.4
19	5.4	---	---	6.4	175	3.0	9.2	175	4.3
20	8.0	---	---	8.1	161	3.5	8.4	73	1.7
21	6.1	---	---	7.7	91	1.9	7.8	52	1.1
22	5.3	52	.74	4.9	46	.61	7.5	31	.63
23	159	2980	3520	3.9	42	.44	11	26	.77
24	62	1190	487	3.0	46	.37	9.9	23	.61
25	7.6	368	7.6	7.2	210	4.1	7.5	30	.61
26	4.9	245	3.2	163	2650	7540	6.3	27	.46
27	4.4	175	2.1	999	16900	49700	6.3	23	.39
28	4.0	154	1.7	170	7000	920	7.2	26	.51
29	4.3	133	1.5	59	570	91	6.9	32	.60
30	6.0	140	2.3	32	266	23	6.6	28	.50
31	64	890	210	---	---	---	8.5	20	.46
TOTAL	502.9	---	---	1629.0	---	58580.33	2025.0	---	19171.04
JANUARY				FEBRUARY			MARCH		
1	8.4	27	.61	5.8	19	.30	9.5	25	.64
2	7.1	16	.31	5.8	18	.28	9.3	21	.53
3	7.7	16	.33	5.8	18	.28	9.2	20	.50
4	8.0	20	.43	15	85	3.4	9.9	20	.53
5	6.7	11	.20	16	140	6.0	11	20	.59
6	6.4	10	.17	80	2340	802	9.3	19	.48
7	6.7	10	.18	22	490	29	12	18	.58
8	6.5	17	.30	14	250	9.5	6.4	19	.33
9	5.6	26	.39	11	170	5.0	6.0	20	.32
10	5.3	16	.23	10	140	3.8	5.4	21	.31
11	5.7	13	.20	11	100	3.0	6.3	22	.37
12	6.3	11	.19	11	50	1.5	2490	11500	55300
13	5.9	13	.21	11	60	1.8	386	2600	2710
14	6.5	20	.35	115	1860	980	111	1560	468
15	6.5	17	.30	150	1380	559	53	1400	200
16	6.3	17	.29	90	1100	267	31	1190	100
17	7.0	27	.51	52	248	35	23	780	48
18	11	36	1.1	37	204	20	66	3100	1320
19	51	1340	282	28	178	13	73	3030	920
20	11	246	7.3	22	159	9.4	24	450	29
21	9.1	170	4.2	17	139	6.4	21	350	20
22	8.0	120	2.6	12	120	3.9	28	330	25
23	6.9	82	1.5	9.6	105	2.7	31	225	19
24	6.8	32	.59	8.2	85	1.9	29	150	12
25	7.6	26	.53	8.5	69	1.6	25	75	5.1
26	7.3	24	.47	10	52	1.4	19	80	4.1
27	5.8	19	.30	12	35	1.1	11	70	2.1
28	5.6	18	.27	11	28	.83	11	53	1.6
29	6.4	19	.33	---	---	---	13	45	1.6
30	6.3	25	.43	---	---	---	14	50	1.9
31	5.4	20	.29	---	---	---	12	49	1.6
TOTAL	260.8	---	307.11	800.7	---	2769.09	3565.3	---	61194.18

## 07030137 CANE CREEK AT THREE POINT, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL									
1	9.2	32	.79	36	346	93	9.7	85	2.2
2	7.5	38	.77	25	450	30	8.7	68	1.6
3	8.1	45	.98	8.5	400	9.2	8.5	59	1.4
4	7.3	48	.95	6.1	210	3.5	87	3950	2420
5	368	4080	5810	5.1	152	2.1	101	3130	1470
6	249	425	286	5.1	108	1.5	416	17300	44100
7	142	380	146	4.8	172	2.2	192	3160	1760
8	457	4590	7560	18	284	33	160	2990	1560
9	94	740	188	7.3	350	6.9	478	5880	12100
10	42	410	46	7.8	225	4.7	305	4440	5430
11	40	330	36	183	4470	3210	465	3420	5080
12	28	300	23	19	800	41	256	1300	899
13	21	230	13	12	400	13	104	1200	337
14	19	183	9.4	8.5	280	6.4	37	650	65
15	18	145	7.0	34	1190	133	18	380	18
16	12	85	2.8	13	380	13	15	240	9.7
17	17	53	2.4	9.5	240	6.2	11	180	5.3
18	13	49	1.7	619	9100	22600	10	128	3.5
19	10	35	.95	60	1300	211	9.9	80	2.1
20	22	70	4.2	31	650	54	9.7	51	1.3
21	23	78	4.8	20	400	22	9.6	30	.78
22	13	51	1.8	460	12600	33900	9.4	27	.69
23	9.9	45	1.2	191	1760	1290	9.3	30	.75
24	8.7	48	1.1	141	4500	3030	9.2	31	.77
25	7.8	59	1.2	99	2700	722	9.2	28	.70
26	6.8	73	1.3	71	1800	345	9.2	30	.75
27	6.0	60	.97	41	790	87	9.2	29	.72
28	14	69	2.6	22	350	21	32	25	2.2
29	12	64	2.1	18	225	11	11	823	30
30	6.3	53	.90	14	150	5.7	6.1	340	5.6
31	---	---	---	12	105	3.4	---	---	---
TOTAL	1691.6	---	14157.91	2201.7	---	65910.8	2815.7	---	75309.06
JULY									
1	55	3000	541	8.2	115	2.5	2.2	40	.24
2	28	2500	189	7.3	80	1.6	2.3	38	.24
3	17	1900	87	6.0	48	.78	2.7	39	.28
4	14	1100	42	5.2	35	.49	2.8	30	.23
5	12	790	26	4.7	34	.43	3.7	40	.40
6	11	510	15	5.5	55	.82	3.1	42	.35
7	8.9	241	5.8	5.5	45	.67	2.7	36	.26
8	7.5	130	2.6	7.1	84	1.6	2.5	35	.24
9	6.7	88	1.6	6.2	61	1.0	2.7	30	.22
10	6.6	65	1.2	5.1	48	.66	2.7	25	.18
11	6.5	55	.97	4.2	65	.74	3.1	21	.18
12	6.0	51	.83	4.1	50	.55	3.3	19	.17
13	5.8	57	.89	4.0	41	.44	2.7	20	.15
14	5.3	51	.73	3.3	49	.44	2.3	25	.16
15	71	2110	653	3.0	43	.35	2.2	19	.11
16	10	1100	30	3.0	55	.45	2.0	33	.18
17	7.6	650	13	3.4	50	.46	2.2	38	.23
18	7.0	400	7.6	2.8	55	.42	3.5	79	.75
19	6.8	210	3.9	3.0	43	.35	54	1220	212
20	6.8	148	2.7	2.8	35	.26	9.9	400	11
21	6.8	91	1.7	2.6	35	.25	21	650	37
22	6.7	60	1.1	2.6	53	.37	4.5	500	6.1
23	6.8	50	.92	2.5	52	.35	2.7	320	2.3
24	6.8	41	.75	2.5	53	.36	2.1	160	.91
25	11	85	2.5	2.4	58	.38	2.2	113	.67
26	11	80	2.4	2.6	50	.35	1.4	75	.28
27	66	2250	556	2.7	43	.31	1.5	53	.21
28	40	900	97	2.2	40	.24	1.7	45	.21
29	27	550	40	2.0	40	.22	2.2	40	.24
30	17	300	14	2.0	37	.20	2.1	39	.22
31	12	160	5.2	2.2	35	.21	---	---	---
TOTAL	510.6	---	2346.39	120.7	---	18.25	154.0	---	275.71
AUGUST									
1	55	3000	541	8.2	115	2.5	2.2	40	.24
2	28	2500	189	7.3	80	1.6	2.3	38	.24
3	17	1900	87	6.0	48	.78	2.7	39	.28
4	14	1100	42	5.2	35	.49	2.8	30	.23
5	12	790	26	4.7	34	.43	3.7	40	.40
6	11	510	15	5.5	55	.82	3.1	42	.35
7	8.9	241	5.8	5.5	45	.67	2.7	36	.26
8	7.5	130	2.6	7.1	84	1.6	2.5	35	.24
9	6.7	88	1.6	6.2	61	1.0	2.7	30	.22
10	6.6	65	1.2	5.1	48	.66	2.7	25	.18
11	6.5	55	.97	4.2	65	.74	3.1	21	.18
12	6.0	51	.83	4.1	50	.55	3.3	19	.17
13	5.8	57	.89	4.0	41	.44	2.7	20	.15
14	5.3	51	.73	3.3	49	.44	2.3	25	.16
15	71	2110	653	3.0	43	.35	2.2	19	.11
16	10	1100	30	3.0	55	.45	2.0	33	.18
17	7.6	650	13	3.4	50	.46	2.2	38	.23
18	7.0	400	7.6	2.8	55	.42	3.5	79	.75
19	6.8	210	3.9	3.0	43	.35	54	1220	212
20	6.8	148	2.7	2.8	35	.26	9.9	400	11
21	6.8	91	1.7	2.6	35	.25	21	650	37
22	6.7	60	1.1	2.6	53	.37	4.5	500	6.1
23	6.8	50	.92	2.5	52	.35	2.7	320	2.3
24	6.8	41	.75	2.5	53	.36	2.1	160	.91
25	11	85	2.5	2.4	58	.38	2.2	113	.67
26	11	80	2.4	2.6	50	.35	1.4	75	.28
27	66	2250	556	2.7	43	.31	1.5	53	.21
28	40	900	97	2.2	40	.24	1.7	45	.21
29	27	550	40	2.0	40	.22	2.2	40	.24
30	17	300	14	2.0	37	.20	2.1	39	.22
31	12	160	5.2	2.2	35	.21	---	---	---
TOTAL	510.6	---	2346.39	120.7	---	18.25	154.0	---	275.71
SEPTEMBER									
1	55	3000	541	8.2	115	2.5	2.2	40	.24
2	28	2500	189	7.3	80	1.6	2.3	38	.24
3	17	1900	87	6.0	48	.78	2.7	39	.28
4	14	1100	42	5.2	35	.49	2.8	30	.23
5	12	790	26	4.7	34	.43	3.7	40	.40
6	11	510	15	5.5	55	.82	3.1	42	.35
7	8.9	241	5.8	5.5	45	.67	2.7	36	.26
8	7.5	130	2.6	7.1	84	1.6	2.5	35	.24
9	6.7	88	1.6	6.2	61	1.0	2.7	30	.22
10	6.6	65	1.2	5.1	48	.66	2.7	25	.18
11	6.5	55	.97	4.2	65	.74	3.1	21	.18
12	6.0	51	.83	4.1	50	.55	3.3	19	.17
13	5.8	57	.89	4.0	41	.44	2.7	20	.15
14	5.3	51	.73	3.3	49	.44	2.3	25	.16
15	71	2110	653	3.0	43	.35	2.2	19	.11
16	10	1100	30	3.0	55	.45	2.0	33	.18
17	7.6	650	13	3.4	50	.46	2.2	38	.23
18	7.0	400	7.6	2.8	55	.42	3.5	79	.75
19	6.8	210	3.9	3.0	43	.35	54	1220	212
20	6.8	148	2.7	2.8	35	.26	9.9	400	11
21	6.8	91	1.7	2.6	35	.25	21	650	37
22	6.7	60	1.1	2.6	53	.37	4.5	500	6.1
23	6.8	50	.92	2.5	52	.35	2.7	320	2.3
24	6.8	41	.75	2.5	53	.36	2.1	160	.91
25	11	85	2.5	2.4	58	.38	2.2	113	.67
26	11	80	2.4	2.6	50	.35	1.4	75	.28
27	66	2250	556	2.7	43	.31	1.5	53	.21
28	40	900	97	2.2	40	.24	1.7	45	.21
29	27	550	40	2.0	40	.22	2.2	40	.24
30	17	300	14	2.0	37	.20	2.1	39	.22
31	12	160	5.2	2.2	35	.21	---	---	---
TOTAL	510.6	---	2346.39	120.7	---	18.25	154.0	---	275.71

## LOOSAHATCHIE RIVER BASIN

215

07030240 LOOSAHATCHIE RIVER NEAR ARLINGTON, TN

LOCATION.--Lat 35°18'37", long 89°38'23", Shelby County, Hydrologic Unit 08010209, on left bank 20 ft downstream from bridge on U.S. Highways 70 and 79, 1.5 mi upstream from Beaver Creek, 1.5 mi northeast of Arlington, and at mile 30.4.

DRAINAGE AREA.--262 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 250 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: July 8-15, 16-26, Aug. 6-7, Aug. 29 to Sept. 22, Sept. 23-30. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--17 years, 352 ft<sup>3</sup>/s, 18.24 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft<sup>3</sup>/s, Mar. 13, 1975, gage height, 24.96 ft; minimum, 66 ft<sup>3</sup>/s, Apr. 6, 7, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 27	1130	*3,770	*14.76				

Minimum daily discharge, 80 ft<sup>3</sup>/s, July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	335	226	1090	107	108	100	97	90	92	85	85	84	
2	130	127	476	104	106	100	97	92	93	85	84	84	
3	110	109	198	103	106	100	96	89	220	85	84	84	
4	104	102	160	102	109	97	93	89	575	83	83	84	
5	101	99	145	101	112	97	789	89	1630	83	83	84	
6	100	98	135	100	125	95	360	89	1650	83	83	84	
7	100	98	129	99	124	93	169	89	851	85	84	84	
8	96	95	125	98	112	92	242	91	384	99	100	83	
9	96	94	122	98	110	92	163	91	1030	83	214	83	
10	96	93	120	98	109	92	120	96	522	82	522	83	
11	96	97	1020	100	108	92	110	163	385	82	138	83	
12	96	95	712	100	108	117	107	109	199	81	113	82	
13	96	96	261	100	108	327	103	96	127	81	107	82	
14	96	96	185	100	511	154	101	93	110	80	103	82	
15	107	95	146	100	550	121	100	91	105	191	105	82	
16	99	158	136	100	207	108	97	91	101	89	105	81	
17	95	156	129	101	152	100	96	91	99	84	108	81	
18	94	320	123	106	232	135	95	100	96	83	98	81	
19	95	134	118	112	156	833	94	101	94	83	95	81	
20	107	110	116	107	134	201	108	91	93	82	94	81	
21	102	102	113	109	122	140	105	91	91	82	92	81	
22	96	100	112	109	114	125	95	127	91	82	91	102	
23	203	99	112	107	113	117	91	155	100	81	91	86	
24	181	98	111	107	110	115	89	110	109	81	90	84	
25	108	98	109	106	108	110	88	179	90	81	89	84	
26	101	100	107	106	107	108	88	116	88	84	126	84	
27	100	2670	106	106	106	105	88	118	87	346	142	84	
28	100	1290	106	107	103	103	88	99	87	103	96	84	
29	100	335	106	108	---	102	88	113	87	91	85	83	
30	105	208	105	108	---	100	92	95	85	88	85	83	
31	488	---	106	108	---	100	---	92	---	87	84	---	
TOTAL	3933	7598	6839	3217	4270	4371	4149	3226	9371	2995	3559	2508	
MEAN	127	253	221	104	153	141	138	104	312	96.6	115	83.6	
MAX	488	2670	1090	112	550	833	789	179	1650	346	522	102	
MIN	94	93	105	98	103	92	88	89	85	80	83	81	
CFSM	.48	.97	.84	.40	.58	.54	.53	.40	1.19	.37	.44	.32	
IN.	.56	1.08	.97	.46	.61	.62	.59	.46	1.33	.43	.51	.36	
CAL YR 1985	TOTAL	95501		MEAN	262	MAX	4700	MIN	82	CFSM	1.00	IN.	13.56
WTR YR 1986	TOTAL	56036		MEAN	154	MAX	2670	MIN	80	CFSM	.59	IN.	7.96

## WOLF RIVER BASIN

07031650 WOLF RIVER AT GERMANTOWN, TN

LOCATION.--Lat 35°06'59", long 89°48'05", Shelby County, Hydrologic Unit 08010210, on left bank at bridge on Germantown Road at Germantown, 3.6 mi downstream from Grays Creek, 6.4 mi upstream from Fletcher Creek, and at mile 18.9.

DRAINAGE AREA.--699 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to September 1986 (discontinued). Published as "near Germantown" prior to 1978.

GAGE.--Water-stage recorder. Datum of gage is 235.76 ft above National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).

REMARKS.--Estimated daily discharges: Oct. 1-7, Mar. 25 to Apr. 21 and May 10-13. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--17 years, 1,004 ft<sup>3</sup>/s, 19.51 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,400 ft<sup>3</sup>/s, Mar. 14, 1975, gage height; 27.98 ft, minimum, 190 ft<sup>3</sup>/s, Sept. 15, 16, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base of 7,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
June 5	1930	*4,010	*10.49				

Minimum discharge, 222 ft<sup>3</sup>/s, July 26, Aug. 3, 4, 5, Sept. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	520	824	1620	414	375	380	390	313	384	302	225	225	
2	470	724	1420	423	379	369	375	305	447	349	227	226	
3	425	570	1270	411	382	365	365	302	433	315	223	227	
4	400	470	943	409	425	360	355	297	1030	317	222	275	
5	385	424	770	408	424	354	950	293	2180	301	222	231	
6	380	405	684	402	508	350	840	297	2300	294	223	231	
7	372	390	614	396	508	348	660	292	2340	287	257	230	
8	353	377	558	389	525	342	790	295	2890	290	248	227	
9	344	365	513	380	521	341	660	293	2950	276	234	225	
10	331	358	488	381	546	343	560	405	2530	268	250	227	
11	322	355	923	382	548	340	500	520	2560	261	243	255	
12	318	353	797	380	519	461	465	415	2430	256	235	280	
13	313	353	778	378	479	738	420	385	2190	251	232	251	
14	325	351	721	379	1050	701	390	346	1810	248	231	236	
15	376	348	604	375	1380	611	380	340	1070	260	244	232	
16	395	453	556	376	1260	549	370	336	697	262	283	230	
17	392	603	528	377	906	551	365	321	573	264	274	229	
18	370	771	499	390	816	558	360	376	502	248	274	227	
19	381	602	467	410	784	973	360	322	443	242	257	224	
20	565	527	442	439	707	1320	415	313	403	238	247	228	
21	641	516	427	440	590	1290	395	308	380	236	240	229	
22	584	539	421	437	513	1020	377	359	363	232	236	263	
23	477	541	420	432	467	865	355	355	361	229	235	299	
24	616	497	422	426	448	728	348	370	482	226	235	300	
25	670	457	411	417	424	570	349	525	357	224	238	270	
26	682	446	398	407	409	540	345	884	332	227	235	252	
27	577	1740	388	391	398	510	336	563	319	358	254	241	
28	503	1610	389	379	393	480	329	485	333	250	229	250	
29	470	1530	389	375	---	455	320	642	307	237	229	249	
30	489	1270	385	378	---	430	313	471	305	229	227	243	
31	807	---	398	376	---	410	---	399	---	227	226	---	
TOTAL	14253	18769	19643	12357	16684	17652	13437	12127	33701	8204	7435	7312	
MEAN	460	626	634	399	596	569	448	391	1123	265	240	244	
MAX	807	1740	1620	440	1380	1320	950	884	2950	358	283	300	
MIN	313	348	385	375	375	340	313	292	305	224	222	224	
CFSM	.66	.90	.91	.57	.85	.81	.64	.56	1.61	.38	.34	.35	
IN.	.76	1.00	1.05	.66	.89	.94	.72	.65	1.79	.44	.40	.39	
CAL YR 1985	TOTAL	259668		MEAN	711	MAX	4520	MIN	290	CFSM	1.02	IN.	13.82
WTR YR 1986	TOTAL	181574		MEAN	497	MAX	2950	MIN	222	CFSM	.71	IN.	9.66



## WOLF RIVER BASIN

07031650 WOLF RIVER AT GERMANTOWN, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1979-82, October 1985 to February 1986 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 07...	1335	379	57	16.0	50	51
NOV 29...	1350	514	65	13.5	329	457
JAN 29...	1400	388	50	7.0	15	16
FEB 19...	1715	760	60	14.0	199	408

## MISSISSIPPI RIVER MAIN STEM

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN  
(National stream-quality accounting network station)

LOCATION.--Lat 35°07'37", long 90°04'25", Shelby County, Hydrologic Unit 08010100, on left bank 50 ft downstream from Harahan Bridge at Memphis, 1.3 mi downstream from Beale Street gage, 3.5 mi downstream from Wolf River, 62.4 mi upstream from St. Francis River, and at mile 734.8.

DRAINAGE AREA.--932,800 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

## PERIOD OF RECORD.--

Discharge: January 1933 to current year. Monthly discharge only for some periods, published in WSP 1311.  
Gage heights: October 1934 to September 1951 and October 1952 to September 1980 in reports of Geological Survey. Since November 1871, at Beale Street gage, in reports of Mississippi River Commission, December 1890 to August 1932 at Beale Street gage, September 1932 to December 1934 at nonrecording gage 1,000 ft downstream, and since December 1934 at water-stage recorder at present site, in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 183.91 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 16, 1934, Beale Street nonrecording gage 1.3 mi upstream at present datum. Apr. 16 to Dec. 21, 1934, nonrecording gage 1,000 ft downstream at present datum.

REMARKS.--Flow regulated by many locks, dams, and reservoirs.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

AVERAGE DISCHARGE.--48 years, 474,200 ft<sup>3</sup>/s, 343,600,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980,000 ft<sup>3</sup>/s, Feb. 8, 1937; maximum gage height, 48.69 ft, Feb. 10, 1937; minimum discharge, 79,200 ft<sup>3</sup>/s, Aug. 26, 1936; minimum gage height, -5.70 ft, Sept. 21, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage prior to 1937, 46.55 ft, Apr. 9, 1913, at Beale Street gage or about 45.2 ft at present site.

NOTE.--Records for 1982, 1983, 1984, 1985, and 1986 water years were not available in time for inclusion in this report. These records will be published in a subsequent report.

## 07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1973 to current year.

PERIOD DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1973 to September 1981.

WATER TEMPERATURES: February 1973 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 571 microsiemens, July 30, 1977; minimum daily, 174 microsiemens, Feb. 7, 1979.

WATER TEMPERATURES: Maximum daily, 32.0°C, July 22, 24, 1981; minimum daily, 0.0°C, Jan. 12-14, 17, 18, 1981.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 30...	1330	457000	360	7.90	17.5	752	45	8.4	89	K200
JAN 28...	1315	422000	560	8.10	4.0	760	31	12.8	98	K2100
APR 23...	1300	496000	430	8.00	16.0	770	3.5	8.6	86	110
JUN 17...	1100	566000	414	7.70	26.5	760	100	6.0	75	K100

DATE	STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WH WAT TOTAL FIELD (MG/L AS CACO3)
OCT 30...	K160	140	31	37	12	16	19	.6	3.8	109
JAN 28...	200	210	75	56	18	21	17	.6	2.9	139
APR 23...	K44	180	48	46	15	14	14	.5	3.4	129
JUN 17...	1000	140	43	37	12	14	17	.5	2.8	99

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
OCT 30...	2.9	50	16	.20	7.1	229	210	.31	283000	1.2
JAN 28...	2.1	71	23	.20	9.3	282	290	.38	321000	1.8
APR 23...	2.5	54	14	.20	8.1	246	230	.33	329000	2.3
JUN 17...	3.8	49	10	.20	5.2	208	190	.28	318000	2.0

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 30...	<.010	.01	.70	.110	.100	.090	.28	170	210000	89
JAN 28...	.170	.22	.90	.180	.060	.060	.18	112	128000	77
APR 23...	.040	.05	.90	.140	.080	.050	.15	94	126000	93
JUN 17...	.080	.10	1.1	.290	.080	.070	.21	275	420000	93

K--Results based on non-ideal colony count.

## MISSISSIPPI RIVER MAIN STEM

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

## WATER-QUALITY RECORDS

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 30...	<10	1	67	1.5	<1	2	<3	14	20	8
JAN 28...	10	1	66	<.5	<1	3	<3	2	18	<5
JUN 17...	20	1	59	<.5	1	<1	<3	6	19	<5

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 30...	8	1	<.1	<10	4	<1	<1	180	<6	6
JAN 28...	11	8	<.1	<10	<1	<1	<1	240	<6	19
JUN 17...	9	2	<.1	<10	1	<1	<1	150	<6	15



## NONCONNAH CREEK BASIN

221

07032200 NONCONNAH CREEK NEAR GERMANTOWN, TN

LOCATION.--Lat 35°02'59", long 89°49'08", Shelby County, Hydrologic Unit 08010211, on left bank at downstream side of bridge on Winchester Road, 2.6 mi south of Germantown, and at mile 17.3.

DRAINAGE AREA.--68.2 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1959-1964, 1969; October 1969 to May 1985, October 1985 to September 1986.

REVISED RECORDS.--WRD TN 1974: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 262.92 ft above National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).

REMARKS.--Estimated daily discharges: Oct. 1 to Nov. 8, Jan. 8, 9, 27, 28, July 11-14, 20-24, Aug. 6-7, Aug. 30 to Sept. 1, Sept. 16-20, 28-30. Records poor.

AVERAGE DISCHARGE.--16 years, (water years 1970-84, 1986), 102 ft<sup>3</sup>/s, 20.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,680 ft<sup>3</sup>/s, Mar. 12, 1975, gage height, 27.11 ft; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
June 5	1215	*2,750	*13.52				

Minimum daily discharge, .02 ft<sup>3</sup>/s, Sept. 10, 17-19, 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	8.0	354	1.9	.08	.55	.09	1.7	47	.43	.27	.92
2	4.0	2.0	78	.64	.09	.49	.06	.55	7.0	31	1.5	.31
3	1.1	.90	24	.41	.09	.45	.05	.34	11	2.5	.32	.41
4	.70	.60	14	.34	14	.38	.05	.23	340	.69	.19	.31
5	.47	.45	10	.31	5.1	.37	191	.17	728	.37	.11	.22
6	.39	.40	6.4	.28	50	.33	61	.23	791	.24	.05	.13
7	.33	.35	3.5	.26	15	.28	14	.31	545	.15	8.8	.08
8	.28	.32	2.8	.31	9.2	.24	12	.92	70	5.1	4.3	.06
9	.25	.29	1.4	.31	5.5	.21	5.3	.38	220	.60	3.6	.04
10	.23	.25	1.0	.23	12	.18	2.8	2.4	84	.28	19	.02
11	.21	.36	111	.21	9.6	.17	1.5	25	88	.12	1.9	20
12	.20	.35	68	.20	7.3	111	1.0	6.4	18	.09	.53	2.8
13	.19	.29	74	.18	4.5	117	3.5	.99	6.2	.07	.22	.28
14	.18	.25	32	.16	341	26	2.0	.39	3.5	.20	.10	.22
15	.30	.23	15	.15	149	12	.93	.24	2.8	1.7	.33	.13
16	.22	39	11	.14	36	6.7	.49	.15	1.3	.85	30	.05
17	.18	48	8.7	.17	22	4.1	.37	2.3	.98	.33	5.4	.02
18	.16	37	5.2	2.1	20	12	.31	30	.66	.18	.45	.02
19	.15	16	2.3	1.8	16	101	.51	3.5	.76	.11	.23	.02
20	.31	9.2	1.6	.71	10	25	42	.64	.49	.09	.13	44
21	.20	3.8	1.2	.38	6.2	10	6.3	.34	.38	.07	.09	10
22	.15	1.6	.95	.26	4.0	4.8	1.8	4.5	.38	.06	.09	36
23	25	1.4	.95	.22	2.1	2.6	.82	2.7	1.4	.05	.08	8.2
24	5.5	1.4	.86	.20	1.7	1.5	.46	30	2.8	.04	.09	1.0
25	1.5	2.0	.53	.17	1.3	1.0	.55	117	.54	1.6	.10	.28
26	.70	5.4	.64	.16	1.5	.92	.64	91	.44	58	10	.16
27	.60	493	.45	.16	.86	1.0	.33	18	.42	48	4.3	.07
28	.55	230	.45	.15	.74	.62	.62	64	6.4	3.1	.37	.02
29	.60	50	.34	.13	---	.39	.35	51	1.4	1.1	.22	.02
30	1.0	23	.34	.08	---	.30	.25	8.8	.67	.59	.08	.02
31	75	---	2.3	.08	---	.18	---	5.0	---	.40	.06	---
TOTAL	148.65	975.84	832.91	12.80	744.86	441.76	351.08	469.18	2980.52	158.11	92.91	125.81
MEAN	4.80	32.5	26.9	.41	26.6	14.3	11.7	15.1	99.4	5.10	3.00	4.19
MAX	75	493	354	2.1	341	117	191	117	791	58	30	44
MIN	.15	.23	.34	.08	.08	.17	.05	.15	.38	.04	.05	.02
CFSM	.07	.48	.39	.01	.39	.21	.17	.22	1.46	.07	.04	.06
IN.	.08	.53	.45	.01	.41	.24	.19	.26	1.63	.09	.05	.07

WTR YR 1986 TOTAL 7334.43 MEAN 20.1 MAX 791 MIN .02 CFSM .29 IN. 4.00

The data given in the following tables include a description of the station and a table showing time, gage height, discharge, and rainfall for the two highest peaks that occurred during the year. The time given corresponds with the first column of data or the first blank (\*). Information is available on some lower peaks, but is not published herein.

MAXIMUM FOR CURRENT YEAR.--Maximum discharge, 201 ft<sup>3</sup>/s, June 4, gage height, 15.90 ft.

UNIT DISCHARGE (CUBIC FEET/SECOND)

<1705>	---	---	---	---	---	---	110	154	165	151	119
<1805>	85	58	44	33	25	19	15	12	10	8.5	6.9
<1905>	5.1	4.7	4.2	4.1	3.8	3.7	3.7	3.6	3.6	3.6	3.6

UNIT RAINFALL, INCREMENTAL (INCHES)

[illegible]

UNIT DISCHARGE (CUBIC FEET/SECOND)

<1305>	---	---	---	---	---	---	---	30	90	140	180
<1405>	201	200	178	143	105	80	75	71	66	60	55
<1505>	49	42	35	30	28	27	26	23	20	17	13
<1605>	12	10	9.7	8.7	7.6	6.5	6.0	5.4	4.8	4.4	3.9

UNIT RAINFALL, INCREMENTAL (INCHES)

[illegible]

## 223

## 07031697 HARRINGTON CREEK TRIBUTARY AT STAGE ROAD AT BARTLETT, TN

DRAINAGE AREA.--0.91 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1974 to current year.

MAXIMUM FOR PERIOD OF RECORD.--Maximum discharge, 960 ft<sup>3</sup>/s, Aug. 22, 1979, gage height, 11.79 ft.

MAXIMUM FOR CURRENT YEAR.--Maximum discharge, 527 ft<sup>3</sup>/s, June 8, gage height, 10.44 ft.

6/ 4/86

UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

<1305>	---	---	---	---	---	---	---	---	---	---	---
<1405>	84	284	364	307	213	133	93	81	80	74	64
<1505>	53	48	43	39	36	33	31	28	27	25	24

6/ 4/86

UNIT RAINFALL, INCREMENTAL (INCHES)

<TIME>

<1305>	0.00	0.00	0.00	0.00	0.02	0.11	0.03	0.24	0.18	0.19	0.10	0.07
<1405>	0.05	0.02	0.04	0.04	0.08	0.05	0.03	0.04	0.03	0.01	0.02	0.01
<1505>	0.00	0.01	0.02	0.02	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00

6/ 8/86

UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

<1305>	---	---	---	---	---	31	29	25	24	23	23	24
<1405>	53	69	74	91	129	198	220	221	200	178	195	292
<1505>	426	505	527	516	522	464	349	247	170	119	91	71
<1605>	57	47	40	35	32	30	27	25	24	23	23	23

6/ 8/86

UNIT RAINFALL, INCREMENTAL (INCHES)

&lt;TIME&gt;

[illegible]

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at crest-stage partial-record stations are presented in the following table. Discharge measurements made at low-flow partial-record sites and at miscellaneous sites and for special studies are given in separate tables.

#### Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from current meter or indirect measurements of peak flow. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1986

Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual Maximum		
					Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
		Cumberland River Basin					
03409000	White Oak Creek at Sunbright, TN	Lat 36°14'38", long 84°40'14", Morgan County, Hydrologic Unit 05130104, at bridge on U.S. Highway 27 in Sunbright. Datum of gage is 1,294.05 ft above National Geodetic Vertical Datum of 1929.	13.5	1934, 1955-82, 1985-86	1986	<5.35	-
03418201	Doe Creek at Gainesboro, TN	Lat 36°21'23", long 85°39'20", Jackson County, Hydrologic Unit 05130106, at bridge on Highway 56, at Gainesboro. Datum of gage is 519.37 ft above National Geodetic Vertical Datum of 1929.	5.72	1978-86	3-13-86	6.68	-
03420360	Mud Creek tributary No. 2 near Summitville, TN	Lat 35°36'10", long 86°01'33", Coffee County, Hydrologic Unit 05130107, at culvert under county road, 3.5 miles northwest of Summitville, and 0.7 mile upstream from mouth.	2.28	1967-86	9- 4-86	5.36	990
03420600	Owen Branch near Centertown, TN	Lat 35°42'30", long 85°53'05", Warren County, Hydrologic Unit 05130107, at bridge on U.S. Highway 70-S, 2.4 miles southeast of Centertown.	4.60	1955-86	6-29-86	2.77	62
03421200	Charles Creek near McMinnville, TN	Lat 35°43'00", long 85°46'05", Warren County, Hydrologic Unit 05130107, at bridge on county road at Faulkner Springs, 2.7 miles north of McMinnville.	31.1	1955-86	6-29-86	8.54	2,640
03424900	Mulherrin Creek near Gordonsville, TN	Lat 36°11'28", long 85°57'11", Smith County, Hydrologic Unit 05130108, at bridge on State Highway 53, 1.3 miles upstream from mouth, 1.5 miles northwest of Gordonsville.	26.9	1982, 1986	9- 4-86	22.37	-
03425045	Peyton Creek at Monoville, TN	Lat 36°18'37", long 85°59'21", Smith County, Hydrologic Unit 05130201, at county road bridge 0.9 mile northwest of Monoville. Datum of gage is 459.39 ft above National Geodetic Vertical Datum of 1929.	44.7	1986	11-28-85	33.81	-



Annual maximum discharge at crest-stage partial-record stations during water year 1986--continued

Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual Maximum		
					Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
Cumberland River basin-- continued							
03425357	Darwin Branch tributary at Hartsville, TN	Lat 36°23'54", long 86°09'08", Trousdale County, Hydrologic Unit 05130201, at culvert on New Hall Town Road, 0.9 miles northwest of Hartsville.	.66	1986	5-25-86	22.16	-
03425365	Second Creek near Walnut Grove, TN	Lat 36°24'01", long 86°12'48", Trousdale County, Hydrologic Unit 05130201, at culvert on State Highways 10 and 25, 2.6 miles west of Hartsville.	3.47	1986	5-25-86	25.49	-
03425500	Spring Creek near Lebanon, TN	Lat 36°10'49", long 86°14'29", Wilson County, Hydrologic Unit 05130201, at bridge on Eastover Road, 3.4 miles southeast of Lebanon. Datum of gage is 556.08 ft above National Geodetic Vertical Datum of 1929.	35.3	1955-61†, 1962-86	2- 3-86	6.68	3,140
03425700	Spencer Creek near Lebanon, TN	Lat 36°14'20", long 86°24'03", Wilson County, Hydrologic Unit 05130201, at bridge on county road, 100 ft north of junction of county road and and U.S. Highway 70, 6.5 miles west of square in Lebanon.	3.32	1955-86	9- 4-86	9.06	2,880
03426874	Brawleys Fork below Bradyville, TN	Lat 35°44'44", long 86°10'14", Cannon County, Hydrologic Unit 05130203, at bridge on Bradyville Pike, 0.5 mile northwest of Bradyville.	15.4	1983-86	9- 4-86	27.18	2,670
034269424	Reed Creek near Bradyville, TN	Lat 35°44'44", long 86°12'31", Rutherford County, Hydrologic Unit 05130203, at bridge on Bradyville Pike, 2.4 miles northwest of Bradyville.	3.52	1983-86	9- 4-86	4.55	-
03428043	Lytle Creek at Sanbyrne Drive at Murfreesboro, TN	Lat 35°49'38", long 86°23'28", Rutherford County, Hydrologic Unit 05130203, at bridge on Sanbyrne Drive, 1 mile south of intersection of Highways 41 and 231 in Murfreesboro. Datum of gage is 591.91 ft above National Geodetic Vertical Datum of 1929.	17.6	1978-86	9- 4-86	2.55	-
03430118	McCrory Creek at Ironwood Drive at Donelson, TN	Lat 36°09'07", long 86°39'02", Davidson County, Hydrologic Unit 05130203, at bridge under Ironwood Drive, 1.3 miles southeast of intersection of U.S. Highway 70 (Lebanon Road) and Donelson Pike in Donelson. Datum of gage is 430.63 ft above National Geodetic Vertical Datum of 1929.	7.31	1977-86a	8-16-86	3.07	161
03430400	Mill Creek at Nolensville, TN	Lat 35°57'32", long 86°40'31", Williamson County, Hydrologic Unit 05130202, at bridge on Sunset Road, 0.6 mile northwest of Nolensville. Datum of gage is 586.18 ft above National Geodetic Vertical Datum of 1929.	12.0	1965-86	9- 4-86	7.32	4,670
03431000	Mill Creek near Antioch, TN	Lat 36°04'54", long 86°40'50", Davidson County, Hydrologic Unit 05130202, at bridge on Franklin-Limestone Road, 1.6 miles north of Antioch. Datum of gage is 472.93 ft above National Geodetic Vertical Datum of 1929.	64.0	1954-61†, 1962-63, 1964-75†, 1976-86	9- 4-86	12.26	4,440

† Operated as a continuous-record gaging station.

a Operated as a flood hydrograph station.

Annual maximum discharge at crest-stage partial-record stations during water year 1986--continued

					Annual Maximum		
Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
Cumberland River basin--continued							
03431040	Sevenmile Creek at Blackman Road, at Nashville, TN	Lat 36°04'21", long 86°44'00", Davidson County, Hydrologic Unit 05130202, at bridge on Blackman Road, 7.0 miles southeast of State capitol in Nashville. Datum of gage is 499.08 ft above National Geodetic Vertical Datum of 1929.	12.2	1965-86	5- 6-84 1985 9- 4-86	a6.27 a<2.42 6.20	-
03431060	Mill Creek at Thompson Lane, near Woodbine, TN	Lat 36°07'04", long 86°43'08", Davidson County, Hydrologic Unit 05130202, at bridge on Thompson Lane, 1.5 miles northeast of intersection of Thompson Lane and Nolensville Road (U.S. Highway 31-A, 41-A) in Woodbine. Datum of gage is 432.55 ft above National Geodetic Vertical Datum of 1929.	93.4	1965-86	11-27-85	10.90	5,780
03431062	Mill Creek tributary at Glenrose Avenue, at Woodbine, TN	Lat 36°07'02", long 86°43'37", Davidson County, Hydrologic Unit 05130202, at culvert under Glenrose Avenue, 1.1 miles northeast of intersection of Nolensville Road and Thompson Lane in Woodbine, and 750 ft upstream from mouth.	1.17	1977-86b	6- 8-86	5.54	410
03431120	West Fork Browns Creek at General Bates Drive, at Nashville, TN	Lat 36°06'29", long 86°47'07", Davidson County, Hydrologic Unit 05130202, at bridge on General Bates Drive, 4.0 miles south of State capitol in Nashville. Datum of gage is 499.94 ft above National Geodetic Vertical Datum of 1929.	3.30	1965-86	6- 8-86	6.24	1,530
03431240	East Fork Browns Creek at Baird-Ward Printing Company, at Nashville, TN	Lat 36°06'33", long 86°46'00", Davidson County, Hydrologic Unit 05130202, at bridge on access road to Baird-Ward Printing Co., Plant No. 1, 500 ft west of 100-Oaks Shopping Center, and 4.0 miles southeast of State capitol in Nashville. Datum of gage is 497.91 ft above National Geodetic Vertical Datum of 1929.	1.58	1965-86	6- 8-86	4.35	422
03431340	Browns Creek at Factory Street, at Nashville, TN	Lat 36°08'26", long 46°45'31", Davidson County, Hydrologic Unit 05130202, at bridge on Factory Street, 800 ft downstream from Louisville and Nashville Railroad bridge, and 2.3 miles southeast of State capitol in Nashville. Datum of gage is 420.66 ft above National Geodetic Vertical Datum of 1929.	13.2	1965-86	6- 8-86	8.35	-
03431490	Pages Branch at Avondale, TN	Lat 36°12'22", long 86°46'24", Davidson County, Hydrologic Unit 05130202, at culvert under Trinity Lane, 900 ft east of intersection of Interstate 65 and Trinity Lane at Avondale, 0.9 mile upstream from mouth.	2.01	1977-86b	6- 9-86	5.96	2,650
03431550	Earthman Fork at Whites Creek, TN	Lat 36°15'55", long 86°49'51", Davidson County, Hydrologic Unit 05130202, at bridge on Whites Creek Pike in town of Whites Creek, 1,800 ft upstream from mouth.	6.29	1965-86	6- 9-86	5.84	826

a Revised.

b Operated as a flood hydrograph station.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

227

Annual maximum discharge at crest-stage partial-record stations during water year 1986--continued

Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Annual Maximum	
						Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
Cumberland River basin--continued							
03431573	Ewing Creek at Richmond Hill Drive at Parkwood, TN	Lat 36°13'50", long 86°46'28", Davidson County, Hydrologic Unit 05130202, at bridge on Richmond Hill Drive, 1.0 mile southeast of Parkwood. Datum of gage is National Geodetic Vertical Datum of 1929.	2.17	1976-86	6- 9-86	497.32	-
03431575	Ewing Creek at Brick Church Pike at Parkwood, TN	Lat 36°13'58", long 86°46'54", Davidson County, Hydrologic Unit 05130202, at bridge on Brick Church Pike, 0.4 mile upstream from North Fork, 0.8 mile south of Parkwood. Datum of gage is National Geodetic Vertical Datum of 1929.	3.02	1976-86	6- 9-86	478.15	-
03431578	Ewing Creek at Gwynwood Drive near Jordania, TN	Lat 36°13'58", long 86°47'32", Davidson County, Hydrologic Unit 05130202, at bridge on county road, 0.3 mile downstream from North Fork, 3.4 miles northeast of Bordeaux, 4.5 miles northeast of Jordania, and at mile 2.1. Datum of gage is National Geodetic Vertical Datum of 1929.	9.98	1976-86	6- 9-86	463.10	-
03431581	Ewing Creek below Knight Road, near Bordeaux, TN	Lat 36°13'55", long 86°48'14", Davidson County, Hydrologic Unit 05130202, at downstream side of bridge on Knight Road, 3.0 miles northeast of Bordeaux. Datum of gage is National Geodetic Vertical Datum of 1929.	13.3	1976-86	6- 9-86	449.80	-
03431677	Sugartree Creek at YMCA Access Road, at Green Hills, TN	Lat 36°06'13", long 86°49'12", Davidson County, Hydrologic Unit 05130202, at bridge on YMCA Access Road, 0.5 mile southwest of Hillsboro High School, at Green Hills. Datum of gage is National Geodetic Vertical Datum of 1929.	1.51	1976-86	6- 9-86	544.54	-
03431679	Sugartree Creek at Abbott Martin Road, at Green Hills, TN	Lat 36°06'23", long 86°49'17", Davidson County, Hydrologic Unit 05130202, at bridge on Abbott Martin Road, at intersection of Bedford Avenue and Abbott Martin Road, at Green Hills. Datum of gage is National Geodetic Vertical Datum of 1929.	2.19	1976-86	6- 9-86	530.26	-
03431795	Bednigo Branch tributary at Chestnut Grove, TN	Lat 36°25'10", long 86°54'11", Robertson County, Hydrologic Unit 05130206, at culvert on Coopertown Road, 0.6 mile southwest of Crunk, 0.6 mile northeast of Chestnut Grove.	0.47	1986	6- 8-86	20.61	-
*03432470	Murfrees Fork above Burwood, TN	Lat 35°48'58", long 86°57'20", Williamson County, Hydrologic Unit 05130204, at county road bridge, just downstream from Cayce Branch, 1.6 miles east of Burwood.	7.43	1986	9- 4-86	26.85	-
*03432925	Little Harpeth River at Granny White Pike, at Brentwood, TN	Lat 36°01'30", long 86°49'09", Williamson County, Hydrologic Unit 05130204, at bridge on Granny White Pike, 2.0 miles southwest of Brentwood. Datum of gage is 618.29 ft above National Geodetic Vertical Datum of 1929.	22.0	1978-86	9- 4-86	11.96	2,870

\* Also a low-flow partial record-station.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations during water year 1986--continued

Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual Maximum		
					Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
Cumberland River basin--continued							
03434590	Jones Creek near Burns, TN	Lat 36°06'15", long 87°19'05", Dickson County, Hydrologic Unit 05130204, at bridge on Rock Church Road, 3.5 miles north of Burns and at mile 21.9.	13.3	1984-86	6- 9-86	5.32	880
03434616	Hall Branch near Charlotte, TN	Lat 36°11'48", long 87°20'30", Dickson County, Hydrologic Unit 05130204, at Culvert under State Highway 48, 1.4 miles north of Charlotte and at mile 2.6.	0.50	1984-86	1986	<12.56	-
034350021	Bartons Creek near Cumberland Furnace, TN	Lat 36°15'02", long 87°20'00", Dickson County, Hydrologic Unit 05130205, at bridge on Stayton road, 1.9 miles south-east of Cumberland Furnace.	22.29	1984-86	1986	<10.23	-
0343500213	Bartons Creek trib- utary near Stayton, TN	Lat 36°15'19", long 87°19'12", Dickson County, Hydrologic Unit 05130205, at Culvert under Jackson Lane road, 1.5 miles southeast of Stayton 2.5 miles southeast of Cumberland Furnace.	0.51	1984-86	1986	<10.08	-
03435030	Red River near Portland, TN	Lat 36°33'24", long 86°34'14", Sumner County, Hydrologic Unit 05130206, at county road bridge, 1.5 miles upstream from Austin Branch, 3.5 miles southwest of Portland and at mile 93.0.	15.1	1966-75, 1976-86	2- 8-86	8.35	1,330
*034351113	Honey Run Creek below Cross Plains, TN	Lat 36°32'31", long 86°42'14", Robertson County, Hydrologic Unit 05130206, at Empson Bridge on county road, 0.4 mile above mouth of Empson branch, 0.6 mile southwest of Cross Plains.	25.8	1986	2- 8-86	21.24	-
03435930	Spring Creek trib- utary near Cedar Hill, TN	Lat 36°32'08", long 86°59'26", Robertson County, Hydrologic Unit 05130206, at culvert on Kinney Road, 1.2 miles southeast of Cedar Hill.	1.40	1986	2- 8-86	21.03	-
03436505	Cummings Creek nr Dotsonville, TN	Lat 36°29'18", long 87°28'06", Montgomery County, Hydrologic Unit 05130205, at bridge on Dotsonville Road, 1.1 miles northeast of Dotsonville.	2.65	1984-86	2- 2-86	7.97	-
03436700	Yellow Creek near Shiloh, TN	Lat 36°20'55", long 87°32'20", Montgomery County, Hydrologic Unit 05130205, at bridge on State Highway 13, 2.6 miles west of Shiloh, 3.0 miles downstream from Leatherwood Creek, 9.0 miles east of Erin. Datum of gage is 390.13 ft above National Geodetic Ver- tical Datum of 1929.	124	1957-80†, 1982-86	6- 9-86	9.80	3,130
Tennessee River Basin							
03461230	Caney Creek near Cosby, TN	Lat 35°47'03", long 83°12'11", Cocke County, Hydrologic Unit 06010106, at culvert under State Highway 32, 3.3 miles southeast of Cosby.	1.62	1967-86	1986	<3.23	<18

\* Also a low-flow partial-record station.

† Operated as a continuous-record station.



Annual maximum discharge at crest-stage partial-record stations during water year 1986--continued

					Annual Maximum		
Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
Tennessee River basin--continued							
03465607	Cherokee Creek near Embreeville, TN	Lat 36°12'24", long 82°29'23", Washington County, Hydrologic Unit 06010108, at culvert on county road, 0.5 mile southeast of Mayday, 1.4 miles northwest of Kansas City and at mile 1.3.	22.9	1984-86	5-28-86	12.35	-
*03465780	Clear Fork near Fairview, TN	Lat 36°19'33", long 82°33'47", Washington County, Hydrologic Unit 06010108, at culvert on State Highway 81, 2.0 miles southwest of Sulfur Springs, and at mile 3.8.	10.5	1983-86	5-28-86	4.23	-
*03466295	Camp Creek at Camp Creek, TN	Lat 36°05'39", long 82°45'37", Greene County, Hydrologic Unit 06010108, at bridge on County road at Camp Creek, 6.2 miles northeast of Nolichucky Dam.	9.99	1983-86	1986	<4.80	-
03466865	Roaring Fork north of Greeneville, TN	Lat 36°12'45", long 82°50'15", Greene County, Hydrologic Unit 06010108, at bridge on county road, 2.3 miles northwest of Bradburn Hill, and at mile 7.3.	16.1	1983-86	5-24-86	6.11	-
03466890	Lick Creek near Albany, TN	Lat 36°14'54", long 82°55'34", Greene County, Hydrologic Unit 06010108, at State Highway 70 bridge, 0.3 mile downstream from Punccheon Camp Creek, 1 mile northwest of Albany, and at mile 33.7.	172	1984-86	2- 1-85 1986	13.39 <11.92	-
03467480	Bent Creek at Taylor Gap, TN	Lat 36°14'08", long 83°06'41", Hamblen County, Hydrologic Unit 06010108, at bridge on county road (Mountain Valley Road), 5.0 miles southeast of Russellville, 2.1 miles southwest of Bulls Gap.	2.18	1986	11-30-85	11.02	-
03467992	Carter Branch near White Pine, TN	Lat 36°07'05", long 83°18'55", Jefferson County, Hydrologic Unit 06010108, at bridge on county road, 1.8 miles northwest of White Pine, 1.6 miles northeast of Kimbrough Crossroad.	-	1986	1986	<4.82	-
*03467993	Cedar Creek near Valley Home, TN	Lat 36°08'03", long 83°18'47", Jefferson County, Hydrologic Unit 06010108, at culvert on county road, 2.2 miles northwest of White Pine, 1.9 miles southeast of Witt, 1.7 miles southeast of Valley Home.	-	1986	1986	<11.88	-
*03467998	Sinking Fork at White Pine, TN	Lat 36°07'21", long 83°17'44", Jefferson County, Hydrologic Unit 06010108, at culvert on county road, 2.7 miles northeast of Kimbrough Crossroads, 0.9 mile northwest of White Pine.	-	1986	7-10-86	5.49	-
03470215	Dumplin Creek at Mt. Hareb, TN	Lat 36°04'59", long 83°25'51", Jefferson County, Hydrologic Unit 06010107, at culvert on county road, 4.6 miles north of Dandridge, 4.3 miles southeast of Jefferson City, 0.8 mile southeast of Mt. Hareb.	-	1986	6-27-86	10.03	-
03476960	Indian Creek at Childress, TN	Lat 36°25'38", long 82°15'54", Sullivan County, Hydrologic Unit 06010102, at bridge on U.S. Highway 19, 3.3 miles south of Bluff City, and at mile 4.6.	6.79	1983-86	11- 4-85	7.29	-

\* Also a low-flow partial-record station.

a Revised

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations during water year 1986--continued

Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual Maximum		
					Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
Tennessee River basin--continued							
03478615	Evans Creek near Blountville, TN	Lat 36°31'19", long 82°18'12", Sullivan County, Hydrologic Unit 06010102, at State Highway 37 bridge, 1.5 miles south-east of Blountville. Datum of gage is 1500.00 ft above National Geodetic Vertical Datum of 1929.	2.50	1983-86	2-18-86	11.80	-
*03481600	Corn Creek at Mountain City, TN	Lat 36°29'23", long 81°48'52", Johnson County, Hydrologic Unit 06010103, at bridge on county road, 600 ft north of junction of county road and U.S. Highway 421, 1 mile northwest of Mountain City.	5.34	1959-61, 1963-86	1986	<2.14	<47
03487507	Horse Creek at Sullivan Gardens, TN	Lat 36°28'13", long 82°35'52", Sullivan County, Hydrologic Unit 06010102, at bridge on county road, 2.5 miles southwest of Vernon Heights, and at mile 7.3.	26.0	1983-86	2-18-86	12.16	-
03490522	Forgey Creek at Zion Hill, TN	Lat 36°29'12", long 82°53'08", Hawkins County, Hydrologic Unit 06010104, at culvert on county road (Carter Valley Road), 7.8 miles northeast of Rogersville, 0.9 mile north of Zion Hill.	-	1986	1986	<17.96	-
03491490	Dodson Creek tributary near Rogersville, TN	Lat 36°21'19", long 82°57'03", Hawkins County, Hydrologic Unit 06010104, at bridge on county road, 1.4 miles northwest of Enterprise, and at mile 0.5.	0.32	1983-86	2-18-86	3.73	-
03491540	Robertson Creek near Persia, TN	Lat 36°20'24", long 83°02'27", Hawkins County, Hydrologic Unit 06010104, at bridge on State Highway 113, 0.25 mile below Mooney Branch, and at mile 3.0.	14.6	1986	2-18-86	10.36	-
03494714	Dry Land Creek tributary near New Market, TN	Lat 36°03'33", long 83°34'13", Jefferson County, Hydrologic Unit 06010104, at culvert on county road (Rocky Valley Road), 3.3 miles northwest of Piedmont, 3.0 miles south of New Market.	-	1986	1986	<10.04	-
*03494990	Flat Creek at Luttrell, TN	Lat 36°11'45", long 83°44'44", Union County, Hydrologic Unit 06010104, at bridge on State Highway 61, 3.5 miles northwest of Blaine, 0.3 mile southwest of Luttrell.	-	1986	2-17-86	10.25	-
03519610	Baker Creek tributary near Binfield, TN	Lat 35°41'56", long 84°02'46", Blount County, Hydrologic Unit 06010204, at culvert under county road, 1.5 miles east of Binfield.	2.10	1966-77, 1979-86	1986	<3.19	<22
03519640	Baker Creek near Greenback, TN	Lat 35°40'21", long 86°46'28", Blount County, Hydrologic Unit 06010204, at county road bridge, 1.0 mile upstream from Little Baker Creek, 3.4 miles east of Greenback, and at mile 15.0. Datum of gage is 845.01 ft above National Geodetic Vertical Datum of 1929.	16.0	1965-75†, 1976-86	1986	<6.07	<292

\* Also a low-flow partial-record station.

† Operated as a continuous-record gaging station.

Annual maximum discharge at crest-stage partial-record stations during water year 1986--continued

Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual Maximum		
					Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
Tennessee River basin--continued							
*03527800	Big War Creek at Luther, TN	Lat 36°27'18", long 83°14'29", Hancock County, Hydrologic Unit 06010205, at bridge on county road, 6.0 miles southwest of Sneedville, 0.8 mile northwest of Yount Town, 0.4 mile south of Luther.	-	1986	2-18-86	6.05	-
*03528390	Crooked Creek near Maynardville, TN	Lat 36°15'56", long 83°50'25", Union County, Hydrologic Unit 06010205, at culvert on State Highway 170, 5.5 miles north-east of Paulette, 2.5 miles northwest of Maynardville.	-	1986	7-14-86	2.17	-
03534000	Coal Creek at Lake City, TNa	Lat 36°13'14", long 84°09'27", Anderson County, Hydrologic Unit 06010207, at bridge on U.S. Highway 25-W, at Lake City. Datum of Gage is 842.76 ft above National Geodetic Vertical Datum of 1929.	24.5	1932-34†, 1955-86	6- 9-86	3.25	1,050
03535180	Willow Fork near Halls Crossroads, TN	Lat 36°05'59", long 83°54'27", Knox County, Hydrologic Unit 06010207, at culvert under Quarry Road, 1.7 miles northeast of Halls Crossroads. Datum of gage is 1,027.82 ft above National Geodetic Vertical Datum of 1929.	3.23	1967-86	2-17-86	5.52	72
03555900	Coker Creek near Ironsburg, TN	Lat 35°13'05", long 84°20'28", Monroe County, Hydrologic Unit 06020002, at bridge on State Highway 68, 4.2 miles southwest of Coker Creek.	22.4	1983-86	1986	<1.98	-
03566599	North Chickamauga Creek at Greens Mill, near Hixson, TN	Lat 35°10'30", long 85°13'40", Hamilton County, Hydrologic Unit 06020001, at bridge on Boy Scout Road, 2.3 miles north of Hixson.	99.5	1925,1944, 1953-56, 1980-86	2-17-86	30.46	-
03569168	Stringers Branch at Leawood Drive, at Red Bank, TN	Lat 35°07'00", long 85°17'28", Hamilton County, Hydrologic Unit 06020001, at bridge on Leawood Drive at Red Bank.	1.54	1980-86	9- 4-86	23.80	-
03571500	Little Sequatchie River at Sequatchie, TN	Lat 35°07'47", long 85°35'10", Marion County, Hydrologic Unit 06020004, at Highway 27 bridge, 1.0 mile northeast of Sequatchie.	116	1925,1929, 1930, 1932-34†, 1944,1951-54, 1965,1979-86	2-17-86	7.95	-
03571730	Standifer Branch at Jasper, TN	Lat 35°04'22", long 85°36'56", Marion County, Hydrologic Unit 06020004, at bridge on U.S. Highways 41, 64, and 72, 0.6 mile east of courthouse, 0.8 mile above Town Creek, at Jasper.	15.3	1982-86	2-17-86	15.00	-
03571800	Battle Creek near Monteagle, TN	Lat 35°08'03", long 85°46'15", Marion County, Hydrologic Unit 06030001, at bridge on former U.S. Highways 41 and 64, 9.2 miles southeast of Monteagle. Datum of gage is 621.51 ft above National Geodetic Vertical Datum of 1929.	50.4	1955-86	2-17-86	7.49	3,080
03583200	Chicken Creek at McBurg, TN	Lat 35°11'03", long 86°48'47", Lincoln County, Hydrologic Unit 06030003, at bridge on county highway R7374 in McBurg.	7.66	1955-86	5-28-86	7.51	5,050

\* Also a low-flow partial-record station.

<sup>a</sup> Published as at Coal Creek prior to 1935.

† Operated as a continuous-record gaging station.

Annual maximum discharge at crest-stage partial-record stations during water year 1986--continued

Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual Maximum		
					Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
Tennessee River basin--continued							
03583300	Richland Creek near Cornersville, TN	Lat 35°19'10", long 86°52'20", Marshall County, Hydrologic Unit 06030004, at bridge on U.S. Highway 31-A, 3.4 miles southwest of Cornersville. Datum of gage is 754.28 ft above National Geodetic Vertical Datum of 1929.	47.5	1962-68†, 1969-86	5-29-86	10.83	2,760
035944242	Owl Creek at Lexington, TN	Lat 35°38'26", long 88°22'13", Henderson County, Hydrologic Unit 06040001, on State Highway 20, 1.37 miles east of Lexington, and at mile 1.3.	2.50	1984-86	3-18-86	12.56	-
03597300	Wartrace Creek above Bell Buckle, TN	Lat 35°37'45", long 86°21'22", Bedford County, Hydrologic Unit 06040002, at culvert under county road, 2.7 miles north of Bell Buckle.	4.99	1966-86	9- 4-86	8.65	1,530
03599200	East Rock Creek at Farmington, TN	Lat 35°30'05", long 86°42'50", Marshall County, Hydrologic Unit 06040002, at culvert, on old State Highway 64, 0.2 mile west of Farmington.	43.1	1954-86	5-29-86	8.20	1,620
03602170	West Piney River at Hwy 70 near Dickson, TN	Lat 36°05'21", long 87°28'12", Dickson County, Hydrologic Unit 06040003, at U.S. Highway 70 bridge, 4.0 miles west of Dickson.	2.16	1984-86	1986	<22.83	<192
03604070	Coon Creek tributary near Hohenwald, TN	Lat 35°34'07", long 87°40'02", Perry County, Hydrologic Unit 06040004, at culvert under State Highway 20, 7.0 miles northwest of Hohenwald.	0.51	1967-86	1986	<3.37	<57
03604080	Hugh Hollow Branch near Hohenwald, TN	Lat 35°34'59", long 87°40'36", Perry County, Hydrologic Unit 06040004, at culvert under State Highway 20, 8.0 miles northwest of Hohenwald.	1.52	1967-86	2-18-86	1.62	11
03604090	Coon Creek above Chop Hollow, near Hohenwald, TN	Lat 35°35'19", long 87°41'09", Perry County, Hydrologic Unit 06040004, at bridge on State Highway 20, 9.0 miles northwest of Hohenwald.	6.02	1967-86	11-28-85	3.69	306
03604580	Blue Creek near New Hope, TN	Lat 36°03'52", long 87°38'58", Humphreys County, Hydrologic Unit 06040003, at county road bridge, 1.8 miles northwest of New Hope, 3.1 miles southeast of McEwen, and at mile 3.9.	13.2	1984-86	9-26-85 1986	a17.12 <16.04	- -
03604595	Little Blue Creek tributary near Gorman, TN	Lat 36°19'44", long 87°42'13", Humphreys County, Hydrologic Unit 06040003, at culvert under county road, 1.8 miles south of Gorman, 4.4 miles southwest of McEwen, and at mile 0.3.	0.62	1984-86	6- 8-86	18.80	-
03605880	Cane Creek at Stewart, TN	Lat 36°19'09", long 87°50'21", Houston County, Hydrologic Unit 06040005, at bridge on county road, 200 ft north of intersection of county road and State Highway 147, and at mile 7.0.	4.12	1984-86	11- 1-85	16.61	-

† Operated as a continuous-record gaging station.

a Revised



## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Annual maximum discharge at crest-stage partial-record stations during water year 1986--continued

					Annual Maximum		
Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
Obion River Basin							
07024225	Neil Ditch near Henry, TN	Lat 36°10'19", long 88°23'33", Henry County, Hydrologic Unit 08010203, located on county road, 2.7 miles southeast of Henry, 1.6 miles north of Henry-Carroll county line.	4.07	1984-86	6- 9-86	11.33	-
07024370	Little Reedy Creek near Huntingdon, TN	Lat 35°55'44", long 88°29'50", Carroll County, Hydrologic Unit 08010203, located on U.S. Highway 70, 0.6 mile southwest of Leach, 5.6 miles northeast of Cedar Grove.	0.91	1984-86	1984 1985 1986	<14.73 <14.73 <14.73	- - -
07029090	Lewis Creek near Dyersburg, TN	Lat 36°03'14", long 89°21'42", Dyer County, Hydrologic Unit 08010204, at bridge on U.S. Highway 51, 2.1 miles north-east of square in Dyersburg. Datum of gage is 276.52 ft above National Geodetic Vertical Datum of 1929.	25.5	1955-78, 1980-83, 1985-86	6- 6-86	13.72	824

## Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1986

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
CUMBERLAND RIVER BASIN						
03418935	Beaverdam Creek at Latana Road near Bellview, TN	Lat 35°44'07", long 85°11'43", Bledsoe County, Hydrologic Unit 05130108, 1.2 miles southwest of Bellview, 2.8 miles southwest of Winesap, 3.1 miles southeast of Herbert Domain.	17.0	1979-81, 1983-86	10- 9-85 7- 8-86	6.8 0
03418950	Bee Creek near Herbert Domain, TN	Lat 35°46'24", long 85°13'58", Cumberland County, Hydrologic Unit 05130108, at Old Rocky Ford, on county road, 100 feet below Little Cane Creek, 1.1 miles northeast of Herbert Domain.	59.6	1985-86	10- 9-85 7- 8-86 8- 5-86 8-21-86	25 2.7 .07 .03
03420116	Rocky River at Rocky River Road at Riverview, TN	Lat 35°42'04", long 85°34'40", Van Buren County, Hydrologic Unit 05130108, on Rocky River Road, 3.0 miles south of Rocky River Road-State Highway 30 intersection.	72.0	1979-81, 1983-86	10- 9-85 4-16-86 8-22-86	24 30 1.5
03420470	North Prong Barren Fork at Oak Grove, TN	Lat 35°42'40", long 85°57'25", Warren County, Hydrologic Unit 05130107, at county road bridge, 2.3 miles southwest of Centertown, 0.9 mile northeast of Oak Grove, and at mile 2.9.	29.8	1983-86	10- 8-85 4-23-86	15 16
03420720	Hickory Creek near Viola, TN	Lat 35°34'32", long 85°51'02", Warren County, Hydrologic Unit 05130107, at State Highway 108 bridge, 2.9 miles north of Viola.	58.2	1954, 1979-81, 1983-86	10- 8-85 4-17-86 8-22-86	13 11 0
03421150	Charles Creek at Daylight, TN	Lat 35°44'32", long 85°51'12", Warren County, Hydrologic Unit 05130107, at county road bridge, 2.5 miles north of Bethany, 0.3 mile southeast of Daylight.	13.8	1983-86	10- 8-85 4-23-86 8-22-86	3.1 3.0 1.6
03432334	Harpeth River at Interstate Hwy 65 near Franklin, TN	Lat 35°53'32", long 86°49'46", Williamson County, Hydrologic Unit 05130204, at Interstate Highway 65 bridge, 3.2 miles southeast of Franklin, and at mile 92.3.	168	1975, 1986	5-13-86 7- 7-86 8-25-86	9.7 6.4 2.6
*03432470	Murfrees Fork above Burwood, TN	Lat 35°48'58", long 86°57'20", Williamson County, Hydrologic Unit 05130204, at county road bridge, just downstream from Cayce Branch, 1.6 miles east of Burwood, and at mile 6.4.	7.43	1975, 1986	10-17-85 4-24-86 5-12-86 8-25-86	.55 1.5 .58 .32
03432474	West Prong Murfrees Fork near Burwood, TN	Lat 35°49'40", long 86°57'55", Williamson County, Hydrologic Unit 05130204, at county road bridge, 1.5 miles northeast of Burwood, and at mile 0.3.	4.93	1975, 1986	10-22-85 4-24-86 5-12-86	.30 .92 .28
03432495	Murfrees Fork above Leipers Fork, TN	Lat 35°51'57", long 86°57'38", Williamson County, Hydrologic Unit 05130204, at bridge on Floyd Road, 3.0 miles southeast of town of Leipers Fork, and at mile 2.3.	26.3	1975, 1986	10-17-85 4-24-86 5-12-86	1.2 5.3 2.1
*03432925	Little Harpeth River at Granny White Pike at Brentwood, TN	Lat 36°01'30", long 86°49'09", Williamson County, Hydrologic Unit 05130204, at bridge on Granny White Pike, 2.0 miles southwest of Brentwood, and at mile 1.1.	22.0	1978-86	4-14-86 5-13-86 7-10-86 8-25-86	5.6 1.7 1.8 3.1

\* Also crest-stage partial-record station.

Discharge measurements made at low-flow partial-record stations during water year 1986--Continued

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
CUMBERLAND RIVER BASIN--Continued						
03433660	South Harpeth River at Fernvale, TN	Lat 35°57'15", long 87°04'43", Williamson County, Hydrologic Unit 05130204, at new county road bridge at Fernvale, 3.1 miles southeast of Fairview, and at mile 14.0.	27.6	1974-75, 1978-86	4-17-86 5-14-86 6-30-86 8-22-86	18 12 13 10
03433902	Big Turnbull Creek near Liberty Hill, TN	Lat 35°57'59", long 87°11'56", Williamson County, Hydrologic Unit 05130204, 250 ft below county road bridge, 1.5 miles southwest of Liberty Hill.	a12.5	1981, 1983-86	10- 3-85 4-17-86 5-14-86 6-30-86 8-22-86	15 7.2 4.7 4.1 3.2
03434620	Town Branch near Charlotte, TN	Lat 36°10'44", long 87°18'15", Dickson County, Hydrologic Unit 05130204, at bridge on Old Ashland City Road, 2.0 miles east of Charlotte, and at mile 1.5.	8.33	1974-76, 1978-86	5-15-86 8-26-86	.84 .11
*034351113	Honey Run Creek below Cross Plains, TN	Lat 36°32'31", long 86°42'14", Robertson County, Hydrologic Unit 05130206, at Empson bridge on county road, 0.4 miles above mouth of Empson Branch, 0.6 miles southwest of Cross Plains.	25.8	1985-86	10-11-85 4-14-86 5-13-86 8-25-86	2.7 7.4 3.9 1.3
03435320	Red River at Adams, TN	Lat 36°35'37", long 87°03'33", Robertson County, Hydrologic Unit 05130206, at bridge on Keysburg Road, 0.9 mile north of Adams.	594	1937, 1983-86	8-25-86	82
TENNESSEE RIVER BASIN						
03455050	Clear Creek at Parrotville, TN	Lat 35°00'36", long 83°05'45", Cocke County, Hydrologic Unit 06010105, at bridge on U.S. 321, 6.5 miles northeast of Newport, 3.0 miles southwest of Salem, 0.5 mile southeast of Brookside Mill.	-	1986	1-15-86 3-25-86 7-30-86	2.1 5.8 1.4
034611996	Crying Creek above Cosby, TN	Lat 35°46'54", long 83°13'01", Cocke County, Hydrologic Unit 06010106, at culvert on road to Cosby Creek Campground in Great Smoky Mountain National Park, 2.4 miles southeast of Cosby, and 150 ft above mouth.	2.94	1983-86	1-16-86 3-26-86 7-31-86	2.1 4.7 .91
03461450	English Creek near Newport, TN	Lat 35°54'47", long 83°12'42", Cocke County, Hydrologic Unit 06010106, at bridge on State Highway 32, 0.9 mile downstream from Laurel Branch, 3.7 miles southwest of Newport, and at mile 3.5.	9.74	1983-86	1-16-86 3-26-86 7-31-86	2.2 7.3 1.7
03465603	Little Cherokee Creek at Garber, TN	Lat 36°12'56", long 82°28'03", Washington County, Hydrologic Unit 06010108, at culvert on State Highway 67, 2.5 miles north of Embreeville, 2.0 miles southwest of Little Cherokee, 0.5 mi southwest of Garber.	-	1986	1-15-86 3-25-86 7-31-86	3.0 7.1 1.5
03465620	Clark Creek at Graham Mill, TN	Lat 36°10'04", long 82°32'27", Washington County, Hydrologic Unit 06010108, at bridge on State Highway 107, 4.5 miles southwest of Embreeville, 3.0 miles northeast of Mt. Carmel, 0.7 miles southeast of Graham Mill.	-	1986	1-15-86 3-25-86 7-31-86	3.2 9.8 .49
*03465780	Clear Fork near Fairview, TN	Lat 36°19'33", long 82°33'47", Washington County, Hydrologic Unit 06010108, at culvert on State Highway 81, 2.0 miles southwest of Sulphur Springs, and at mile 3.8.	10.5	1983-86	1-15-86 3-25-86 7-30-86	1.9 6.2 1.6

a Revised.

\* Also crest-stage partial-record station.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at low-flow partial-record stations during water year 1986--Continued

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
TENNESSEE RIVER BASIN--Continued						
03465800	Muddy Fork at Fairview, TN	Lat 36°18'52", long 82°32'38", Washington County, Hydrologic Unit 06010108, at bridge on State Highway 81, 4.2 miles northwest of Jonesboro, 0.7 mile west of Fairview.	9.86	1955-73a 1986	1-15-86 3-25-86 7-30-86	1.9 6.6 1.6
03466256	College Creek at Tusculum, TN	Lat 36°09'55", long 82°45'17", Greene County, Hydrologic Unit 06010108, at bridge on county road, 4.0 miles east of Greenville, 0.7 mile south of Tusculum.	-	1986	1-15-86 3-25-86 7-30-86	1.6 3.4 1.1
*03466295	Camp Creek at Camp Creek, TN	Lat 36°05'39", long 82°45'37", Greene County, Hydrologic Unit 06010108, at bridge on county road at Camp Creek, 2.0 miles southeast of Jones Bridge, 6.2 miles northeast of Nolichucky Dam.	9.99	1961, 1983-86	1-15-86 3-25-86 7-30-86	13 27 6.0
*03467993	Cedar Creek near Valley Home, TN	Lat 36°08'03", long 83°18'47", Jefferson County, Hydrologic Unit 06010108, at culvert on county road, 2.2 miles northwest of White Pine, 1.9 miles south- east of Valley Home.	-	1986	1-16-86 3-26-86 7-31-86	.43 1.7 .44
*03467998	Sinking Fork at White Pine, TN	Lat 36°07'21", long 83°17'44", Jefferson County, Hydrologic Unit 06010108, at culvert on county road, 2.7 miles north- east of Kimbrough Crossroads, 0.9 mile northwest of White Pine.	-	1986	1-16-86 3-26-86 7-31-86	1.2 4.0 1.1
03469610	Cove Creek at Hatchertown, TN	Lat 35°43'47", long 83°37'43", Sevier County, Hydrologic Unit 06010107, at culvert on county road, 7.8 mile southwest of Pigeon Forge, and at mile 6.3.	2.64	1983-86	1-16-86 3-26-86 7-31-86	3.8 8.6 2.2
03476515	Beidleman Creek near Caywood Ford, TN	Lat 36°31'28", long 82°07'53", Sullivan County, Hydrologic Unit 06010102, at second bridge upstream from mouth, 0.7 mile north of Caywood Ford, 2.4 miles west of South Holston Dam.	27.4	1975-81, 1983-86	1-16-86 3-26-86 7-30-86	13 32 8.6
*03481600	Corn Creek at Mountain City, TN	Lat 36°29'23", long 81°48'52", Johnson County, Hydrologic Unit 06010103, at bridge on county road, 600 ft north of junction of county road and U.S. Highway 421, 1.0 mile northwest of Mountain City.	5.34	1986	1-15-86 3-25-86 7-31-86	1.6 4.1 .50
03486313	Sinking Creek at Johnson City, TN	Lat 36°19'08", long 82°19'17", Washington County, Hydrologic Unit 06010103, at culvert on Dave Buck Road, 1.8 miles north- west of Cedar Grove, 0.5 mile east of Johnson City.	-	1986	1-15-86 3-25-86 7-31-86	4.7 10 4.6
03487509	Bear Creek at Sullivan Gardens, TN	Lat 36°28'23", long 82°35'50", Sullivan County, Hydrologic Unit 06010102, at culvert on State Hwy. 93, 1.0 mile northwest of Poplar Grove, 0.4 mile southwest of Sullivan Gardens.	-	1986	1-16-86 3-26-86 7-30-86	.29 1.2 0
03487545	Boozy Creek near Orebank, TN	Lat 36°34'24", long 82°24'44", Sullivan County, Hydrologic Unit 06010102, at culvert on U.S. Highway 11W, 2.9 miles northeast of Orebank.	10.8	1966, 1986	1-16-86 3-26-86 7-30-86	4.3 11 2.4

a Operated as a crest-stage, partial-record station.

\* Also a crest-stage partial-record station.



Discharge measurements made at low-flow partial-record stations during water year 1986--Continued

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
TENNESSEE RIVER BASIN--Continued						
03490530	Forgey Creek near Surgoinsville, TN	Lat 36°27'20", long 82°51'39", Hawkins County, Hydrologic Unit 06010104, at culvert on East Williams Road between Southern Railway and Old U.S. Highway 11W, 0.8 mile south of Surgoinsville.	4.59	1962, 1986	1-16-86 3-26-86 7-30-86	.91 2.8 .78
*03494990	Flat Creek at Luttrell, TN	Lat 36°11'45", long 83°44'44", Union County, Hydrologic Unit 06010104, at bridge on State Highway 61, 3.5 miles northwest of Blaine, 0.3 mile southwest of Luttrell.	-	1986	1-15-86 3-25-86 7-31-86	3.3 18 3.8
03495400	Roseberry Creek at Shiptown, TN	Lat 36°04'43", long 83°46'14", Knox County, Hydrologic Unit 06010104, at bridge on Troutt Drive, 1.2 miles northeast of Sunrise, 1.2 miles northwest of Mascot, 0.5 mile northwest of Shiptown.	-	1986	1-16-86 3-26-86 7-31-86	2.8 10 1.1
03495550	Love Creek at Knoxville, TN	Lat 36°00'30", long 83°50'20", Knox County, Hydrologic Unit 06010104, at culvert on Holston Drive, 0.7 mile east of Chilhowee School, 0.5 mile west of sewage disposal plant, and at mile 0.7.	-	1986	1-16-86 3-25-86 7-31-86	3.3 7.4 2.2
*03527800	Big War Creek near Luther, TN	Lat 36°27'18", long 83°14'29", Hancock County, Hydrologic Unit 06010205, at bridge on county road, 6.0 miles south- west of Sneedville, 0.8 mile northwest of Yount Town, 0.4 mile south of Luther.	-	1986	1-16-86 3-26-86 7-30-86	4.7 14 1.6
03528385	Fall Creek at Lickskillet, TN	Lat 36°17'15", long 83°48'00", Union County, Hydrologic Unit 06010205, at culvert on State Highway 170, 7.0 mile northeast of Big Ridge State Park, 2.6 mile north of Maynardville.	-	1986	1-15-86 3-25-86 7-30-86	1.1 2.8 .69
*03528390	Crooked Creek near Maynardville, TN	Lat 36°15'36", long 83°50'25", Union County, Hydrologic Unit 06010205, at culvert on State Highway 170, 5.5 miles northeast of Paulette, 2.5 miles northwest of Maynardville.	-	1986	1-15-86 3-25-86 7-30-86	.37 1.7 .21
03534927	Bullrun Creek near Luttrell, TN	Lat 36°14'18", long 83°44'43", Union County, Hydrologic Unit 06010207, at culvert on State Highway 61, 3.0 miles southeast of Maynardville, 2.5 miles north of Luttrell.	-	1986	1-15-86 3-25-86 7-31-86	2.2 8.4 1.3
03534975	North Fork Bullrun Creek below Maynardville, TN	Lat 36°13'47", long 83°49'18", Union County, Hydrologic Unit 06010207, south of State Highway 33, 1.5 miles south- west of high school in Maynardville, and at mile 3.2.	-	1986	1-15-86 3-25-86 7-30-86	1.4 6.7 1.6
03534990	Raccoon Creek at Paulette, TN	Lat 36°11'12", long 83°53'19", Union County, Hydrologic Unit 06010207, at culvert on county road, 6.8 miles southwest of Maynardville, 0.4 mile south- east of Paulette.	-	1986	1-15-86 3-25-86 7-30-86	1.8 4.9 .58
03555882	Barney Creek near Coker Creek, TN	Lat 35°14'29", long 84°19'04", Monroe County, Hydrologic Unit 06020002, at bridge on State Highway 68, 1.6 miles northeast of Ironsburg, and 75 ft above mouth.	4.29	1983-86	1-15-86 3-25-86 7-30-86	2.1 4.3 .20

\* Also crest-stage partial-record station.

Discharge measurements made at low-flow partial-record stations during water year 1986--Continued

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
TENNESSEE RIVER BASIN--Continued						
03556610	Junebug Creek at Reliance, TN	Lat 35°11'24", long 84°30'22", Polk County, Hydrologic Unit 06020002, at culvert on State Highway 30, 2.4 miles southeast of Oswald Dome, 0.2 mile north- west of Reliance, and at mile 0.1.	-	1986	1-15-86 3-25-86 7-30-86	.69 1.1 .31
03566111	Little South Mouse Creek near Charleston, TN	Lat 35°16'13", long 84°46'55", Bradley County, Hydrologic Unit 06020002, at bridge on Walker Valley Road, 2.0 miles southwest of Charleston, and at mile 0.6.	5.58	1967, 1986	1-15-86 3-25-86 7-30-86	1.2 2.5 .49
03566200	Brymer Creek near McDonald, TN	Lat 35°07'20", long 84°57'00", Bradley County, Hydrologic Unit 06020002, at bridge on U.S. Highways 11 and 64, 1.9 miles east of McDonald.	9.68	1983-86	4-15-86	2.7
03566253	Greasy Creek at Hopewell, TN	Lat 35°12'17", long 84°53'11", Bradley County, Hydrologic Unit 06020002, at bridge on Eureka Road, 0.2 mile north of Hopewell, 3.9 miles north of Cleveland, and at mile 0.9.	3.12	1979-81, 1983-86	1-16-86 3-25-86 7-30-86	.23 .99 .02
03582205	Norris Creek below Howell, TN	Lat 35°13'33", long 86°33'56", Lincoln County, Hydrologic Unit 06030003, at bridge on U.S. Highway 231, 2.6 miles east of Howell, 5.1 miles north of Fayetteville, and at mile 8.4.	15.1	1952, 1975, 1978-81, 1983-86	4-14-86 5-13-86 7- 3-86 8-19-86	3.2 1.5 2.6 1.0
03593115	Lick Creek near Michie, TN	Lat 35°04'30", long 88°25'47", McNairy County, Hydrologic Unit 06040001, at county road bridge, 1.7 miles north of Michie, and at mile 11.2.	9.93	1982-86	1-23-86 7- 8-86	1.0 .34
03599960	Aenon Creek near Spring Hill, TN	Lat 35°43'39", long 86°54'20", Maury County, Hydrologic Unit 06040003, at bridge on John Lund Road, 2.1 miles southeast of Spring Hill.	14.2	1986	10-18-85 4-29-86 5-12-86 6-26-86	.49 1.7 .95 2.1
03599965	Rutherford Creek near Spring Hill, TN	Lat 35°42'57", long 86°55'02", Maury County, Hydrologic Unit 06040003, 2.5 miles southeast of Spring Hill, and at mile 19.6.	39.3	1986	10-18-85 4-29-86 5-12-86 6-26-86	1.5 5.5 3.0 4.2
03599970	McCutcheon Creek near Spring Hill, TN	Lat 35°43'39", long 86°55'27", Maury County, Hydrologic Unit 06040003, at bridge on John Lund Road, 1.6 miles southeast of Spring Hill.	10.2	1986	10-17-85 4-29-86 5-12-86 6-26-86	.43 1.3 .86 1.1
03599980	Rutherford Creek near Neapolis, TN	Lat 35°41'36", long 86°57'06", Maury County, Hydrologic Unit 06040003, at bridge on Greens Mill Road, 0.4 mile west of Lanton Church, 1.7 miles southeast of Neapolis, and at mile 13.9.	58.2	1986	10-18-85 4-29-86 5-12-86 6-26-86	2.9 9.2 4.9 7.1
03600085	Carters Creek at Petty Lane near Carters Creek, TN	Lat 35°43'39", long 86°59'19", Maury County, Hydrologic Unit 06040003, at bridge on Petty Lane, 0.8 mile north of Carters Creek, and at mile 4.7.	16.6	1986	10-22-85 4-29-86 5-12-86 6-26-86	.81 2.2 1.3 1.6
03600086	Carters Creek Tributary near Carters Creek, TN	Lat 35°43'34", long 86°59'19", Maury County, Hydrologic Unit 06040003, at culvert on Carters Creek Road, 0.7 mile north of Carters Creek.	2.94	1986	10-22-85 4-29-86 5-12-86 6-26-86	.16 .71 .68 .33
03600088	Carters Creek at Butler Road at Carters Creek, TN	Lat 35°43'02", long 86°59'45", Maury County, Hydrologic Unit 06040003, at bridge on Butler Road, 0.1 mile west of Carters Creek, and at mile 3.7.	20.1	1986	10-18-85 4-29-86 5-12-86 6-26-86 8-25-86	1.0 3.2 1.5 1.8 .55

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at low-flow partial-record stations during water year 1986--Continued

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
TENNESSEE RIVER BASIN--Continued						
03600093	Carters Creek near Dark Mill, TN	Lat 35°41'25", long 87°00'33", Maury County, Hydrologic Unit 06040003, at bridge on Harlan Road, 0.7 mile north of Darks Mill.	32.7	1960, 1986	10-22-85 4-29-86 5-12-86	1.6 5.3 2.8
03600360	Snow Creek near Santa Fe, TN	Lat 35°43'31", long 87°07'36", Maury County, Hydrologic Unit 06040003, above Howard Woody Spring, at State Highway 7 bridge, 0.4 mile above Beech Creek, 0.65 mile south of Santa Fe.	11.1	1962-63, 1965, 1986	10-23-85 4-29-86 5-12-86	2.1 3.4 2.6
03600370	Snow Creek near Williamsport, TN	Lat 35°41'41", long 87°11'18", Maury County, Hydrologic Unit 06040003, 300 feet downstream from first bridge upstream from mouth, 2.0 miles east of Williamsport.	23.2	1944, 1953-54, 1986	4-29-86 5-12-86	6.1 3.8
03600380	Leipers Creek at Williamsport, TN	Lat 35°41'43", long 87°12'10", Maury County, Hydrologic Unit 06040003, 200 feet upstream from mouth, 1.0 mile east of Williamsport.	37.5	1944, 1953-54, 1986	4-29-86 5-12-86	11 9.0
03601100	Big Bigby Creek at Needmore, TN	Lat 35°32'43", long 87°14'05", Maury County, Hydrologic Unit 06040003, at county road at Needmore, 1.2 miles downstream from West Fork, 1.7 miles west of Mount Pleasant.	48.3	1934, 1969, 1972-73, 1978-81, 1983-86	10- 3-85 4-15-86 5-13-86 7- 1-86 8-19-86	15 18 12 8.8 7.7
03602192	West Piney River near Dickson, TN	Lat 36°01'40", long 87°27'00", Dickson County, Hydrologic Unit 06040003, at State Highway 48 bridge, 2.3 miles northeast of Oak Grove, and at mile 1.2.	21.2	1950-52, 1962-63, 1965, 1979-81, 1983-86	10-10-85 5-14-86 8-22-86	9.2 14 8.4
03602194	West Piney River below State Highway 48 near Dickson, TN	Lat 36°00'43", long 87°26'33", Dickson County, Hydrologic Unit 06040003, at mouth, 5.4 miles southwest of Dickson.	25.7	1981, 1984-86	10-10-85 5-15-86 8-22-86	11 14 8.3
03602209	Piney River near Oak Grove, TN	Lat 36°00'36", long 87°26'38", Dickson County, Hydrologic Unit 06040003, 2.2 miles east of Oak Grove.	44.1	1984-86	10-10-85 5-15-86 8-22-86	15 19 12
03602230	Piney River above Pinewood, TN	Lat 35°57'11", long 87°27'53", Hickman County, Hydrologic Unit 06040003, at county road crossing, 0.7 miles below mouth of Plunders Creek, 2.8 miles north of Pinewood, and at mile 17.2.	77.5	1984-86	10-10-85 5-14-86	24 38
03602265	Piney River at Pinewood, TN	Lat 35°54'37", long 87°28'04", Hickman County, Hydrologic Unit 06040003, at county road crossing at Pinewood, 200 ft below mouth of Little Spring Creek, and at mile 13.5.	150	1984-86	10-10-85 5-15-86	57 80
03604750	Birdsong Creek at Holladay, TN	Lat 35°52'53", long 88°08'39", Benton County, Hydrologic Unit 06040005, at bridge on State Highway 69, 0.7 mile north of Holladay.	15.7	1975-78, 1980-86	1-24-86 7- 9-86	8.9 1.1
03606350	Big Sandy River at Westport, TN	Lat 35°53'34", long 88°18'32", Carroll County, Hydrologic Unit 06040005, at county road bridge, 0.3 mile southeast of Westport, and at mile 43.4.	110	1975-78, 1980-86	1-24-86 7- 9-86	66 33

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at low-flow partial-record stations during water year 1986--Continued

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
OBION RIVER BASIN						
07024310	Rock Creek near Huntingdon, TN	Lat 36°00'23", long 88°27'17", Carroll County, Hydrologic Unit 08010203, at bridge on U.S. Highway 70-A, 1.5 miles northwest of Huntingdon, and at mile 0.7.	4.51	1986	1-29-86 7- 9-86	1.1 .07
07024760	Spring Creek near Greenfield, TN	Lat 36°11'24", long 88°45'53", Weakley County, Hydrologic Unit 08010203, at bridge on State Highway 54, 3.2 miles northeast of Greenfield, and at mile 2.3.	93.4	1955, 1975-78, 1980-86	1-29-86 7-18-86	32 24
07025190	Mud Creek near Sharon, TN	Lat 36°15'59", long 88°50'05", Weakley County, Hydrologic Unit 08010203, at bridge on U.S. Highway 45-E, 2.2 miles north of Sharon, and at mile 11.0.	45.6	1958, 1975-78, 1980-86	1-29-86 7-18-86	5.5 .10
07025300	North Fork Obion River at Jones Mill, TN	Lat 36°26'46", long 88°27'57", Henry County, Hydrologic Unit 08010202, at county road bridge at Jones Mill, and at mile 42.8.	83.7	1958-61, 1964, 1975-78, 1980-86	1-24-86 7-18-86	54 41
07026090	Cool Springs Branch near Trimble, TN	Lat 36°11'15", long 89°11'03", Dyer County, Hydrologic Unit 08010202, at bridge on State Highway 105, 1.1 miles south- east of Trimble, and at mile 2.5.	10.7	1986	7-25-86	.42
07026100	Reeds Creek near Trimble, TN	Lat 36°10'48", long 89°15'15", Dyer County, Hydrologic Unit 08010202, at county road bridge, 0.4 mile north of Locust Grove, 4.0 miles southwest of Trimble, and at mile 1.6.	51.8	1975-78, 1980-86	1-14-86	3.3
07027270	Tar Creek at Oak Grove, TN	Lat 35°24'02", long 88°34'54", Chester County, Hydrologic Unit 08010205, at bridge on Finger Road, 0.3 mile south of Oak Grove.	16.4	1982-86	1-23-86 7- 9-86	9.8 3.3
07027280	Jacks Creek at Jacks Creek, TN	Lat 35°28'16", long 88°31'21", Chester County, Hydrologic Unit 08010205, at bridge on State Highway 100, at town of Jacks Creek, and at mile 8.5.	17.9	1975-78, 1980-86	1-23-86 7- 9-86	4.7 1.8
HATCHIE RIVER BASIN						
07030160	Indian Creek at Gilt Edge, TN	Lat 35°33'09", long 89°49'20", Tipton County, Hydrologic Unit 08010208, at bridge on State Highway 59, 0.02 mile east of Gilt Edge.	65.9	1976-78, 1980-81, 1983-86	1-14-86 7-23-86	5.5 1.3



## Miscellaneous Sites

Measurements of streamflow at points other than gaging stations are given in the following table. Measurements of base flow are designated by an asterisk (\*); measurements of peak flow by a dagger (†).

Discharge measurements made at miscellaneous sites during water year 1986

Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements Discharge (ft <sup>3</sup> /s) Date
Cumberland River basin					
03420000 Calfkiller River	Caney Fork to Collins River	Lat 35°54'31", long 85°28'46", White County, Hydrologic Unit 05130108, 1.5 miles downstream from Town Creek, 1.5 miles southwest of Sparta, and at mile 11.5.	175	1940-71	6-26-81 *53
03426998 Bradley Creek	East Fork Stones River to Stones River to Cumberland River	Lat 35°55'43", long 86°16'19", Rutherford County, Hydrologic Unit 05130203, at State Highway 96 Bridge, at Loftin.	30.1	1974	9- 4-86 †20500
03427700 Bushman Creek	East Fork Stones River to Stones River to Cumberland River	Lat 35°53'44", long 86°20'53", Rutherford County, Hydrologic Unit 05130203, at bridge on county road, 4.2 miles northeast of Murfreesboro.	10.5	1966-68 1974	9- 4-86 †4610
03427706 Bear Branch	East Fork Stones River to Stones River to Cumberland River	Lat 35°53'48", long 86°21'27", Rutherford County, Hydrologic Unit 05130203, at culvert on Osborne Road, 1.7 miles southwest of Compton.	2.26	1974	9- 4-86 †3270
03430420 Owl Creek Tributary	Owl Creek to Mill Creek to Cumberland River	Lat 35°56'58", long 86°44'13", Williamson County, Hydrologic Unit 05130202, at county road, 3.8 miles west of Nolensville, and at mile 0.6.	0.52		4-10-86 *0.14
03430425 Owl Creek Tributary	Owl Creek to Mill Creek to Cumberland River	Lat 35°57'09", long 86°43'40", Williamson County, Hydrologic Unit 05130202, at Owl Creek Road, 3.2 miles west of Nolensville, and at mile 0.0.	0.67		4-10-86 *0.22
03430435 Owl Creek Tributary	Owl Creek to Mill Creek to Cumberland River	Lat 35°57'45", long 86°44'20", Williamson County, Hydrologic Unit 05130202, 3.9 miles west of Nolensville, and at mile 0.6.	0.21		4-10-86 *0.07
03430440 Owl Creek Tributary	Owl Creek to Mill Creek to Cumberland River	Lat 35°57'54", long 86°43'53", Williamson County, Hydrologic Unit 05130202, 3.6 miles west of Nolensville, and at mile 0.2.	0.46		4-10-86 *0.07
03430445 Owl Creek Tributary	Owl Creek to Mill Creek to Cumberland River	Lat 35°58'36", long 86°43'33", Williamson County, Hydrologic Unit 05130202, at Sunset Road, 3.5 miles northeast of Nolensville, and at mile 0.1.	0.83		4-10-86 *0.07
034323284 Mayes Creek Tributary	Mayes Creek to Harpeth River to Cumberland River	Lat 35°55'43", long 86°46'04", Williamson County, Hydrologic Unit 05130204, 0.3 miles north of Clovercroft, and at mile 2.1.	0.38		4-10-86 *0.01
034323287 Mayes Creek Tributary	Mayes Creek to Harpeth River to Cumberland River	Lat 35°54'56", long 86°45'53", Williamson County, Hydrologic Unit 05130202, at county road, 0.5 mile south of Clovercroft, and at mile 1.2.	0.99		4-10-86 *0.21
034323925 Harpeth River	Cumberland River	Lat 35°56'35", long 86°52'02", Williamson County, Hydrologic Unit 05130204, 1.8 miles northeast of courthouse in Franklin, and at mile 85.39.	209	1976	1-23-86 *17
03432400 Harpeth River	Cumberland River	Lat 35°56'53", long 86°52'54", Williamson County, Hydrologic Unit 05130204, at bridge on U.S. Highway 431, 1.1 miles downstream from Spence Creek, 1.8 miles northwest of courthouse in Franklin and at mile 84.4.	210	1959-64, 1969-72,	1-23-86 *22

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1986--continued

Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Date	Measurements Discharge (ft <sup>3</sup> /s)
Cumberland River basin--continued						
03432426 Harpeth River	Cumberland River	Lat 35°58'05", long 86°54'03", Williamson County, Hydrologic Unit 05130204, at Cotton Road, 3.5 miles northwest of Franklin, and at mile 79.8.	219	1975-76, 1981	1-23-86	*22
034369843 Dyers Creek Tributary	Dyers Creek to Cumberland River	Lat 36°31'44", long 87°48'53", Stewart County, Hydrologic Unit 05130205, at mouth, 3.2 miles north of Dover, 4.7 miles southwest of Big Rock.	0.49		3-26-86	0
034369844 Dyers Creek Tributary	Dyers Creek to Cumberland River	Lat 36°31'14", long 87°47'47", Stewart County, Hydrologic Unit 05130205, 0.4 mile northwest of Heflin Cemetery, 3.5 miles northeast of Dover, and at mile 1.4.	0.48		3-26-86	0
034369845 Dyers Creek Tributary	Dyers Creek to Cumberland River	Lat 36°31'16", long 87°48'06", Stewart County, Hydrologic Unit 05130205, 0.7 mile northwest of Heflin Cemetery, 3.3 miles northeast of Dover, and at mile 1.1.	0.74		3-26-86	*0.04
034369846 Dyers Creek Tributary	Dyers Creek to Cumberland River	Lat 36°31'30", long 87°49'00", Stewart County, Hydrologic Unit 05130205, at U.S. Highway 79 bridge, 2.9 miles north of Dover, and at mile 0.2.	1.30		3-26-86	*0.46
034369848 Dyers Creek Tributary	Dyers Creek to Cumberland River	Lat 36°31'04", long 87°49'19", Stewart County, Hydrologic Unit 05130205, at U.S. Highway 79 bridge, 250 ft above mouth, 2.4 miles north of Dover.	0.51		3-26-86	*0.35
03437141 Hayes Fork Creek	Saline Creek to Cumberland River	Lat 36°34'14", long 87°49'35", Stewart County, Hydrologic Unit 05130205, 2.3 miles south of Bumpus Mills, 3.7 miles west of Big Rock, and at mile 3.1.	1.45		3-26-86	*0.74
03437143 Hayes Fork Creek Tributary	Hayes Fork Creek to Saline Creek to Cumberland River	Lat 36°34'16", long 87°50'06", Stewart County, Hydrologic Unit 05130205, at mouth, 2.0 miles south of Bumpus Mills, 4.2 miles west of Big Rock.	0.99		3-26-86	*0.63
03437144 Hayes Fork Creek Tributary	Hayes Fork Creek to Saline Creek to Cumberland River	Lat 36°34'18", long 87°50'08", Stewart County, Hydrologic Unit 05130205, at mouth 2.0 miles south of Bumpus Mills.	0.17		3-26-86	0
03437145 Hayes Fork Creek	Saline Creek to Cumberland River	Lat 36°34'19", long 87°50'08", Stewart County, Hydrologic Unit 05130205, at County Road bridge, 2.0 miles south of Bumpus Mills, and at mile 2.48.	2.93		3-26-86	*3.16
Tennessee River basin						
03466300 Nolichucky River	French Broad River to Tennessee River	Lat 36°07'00", long 82°47'00", Greene County, Hydrologic Unit 06010108, at Jones bridge (revised) on State Highway 35 near Greenville, and at mile 54.1.	1141	1937-38 1940	2-26-86	1560
03491410 Holston River	Tennessee River	Lat 36°22'47", long 83°58'14", Hawkins County, Hydrologic Unit 06010104, below John Sevier Steamplant near Rogersville, and at mile 106.	3008		6-19-86	1180
03538605 Obed River	Emory River to Tennessee River	Lat 35°57'40", long 85°03'05", Cumberland County, Hydrologic Unit 06010208, 800 ft below discharge from sewage treat- ment plant at Crossville.	12.41		6-11-86	53

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at miscellaneous sites during water year 1986--continued

Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements Discharge (ft <sup>3</sup> /s) Date
Tennessee River basin--continued					
03566939 Mackey Branch	South Chickamauga Creek to Tennessee River	Lat 35°02'32", long 85°07'09", Hamilton County, Hydrologic Unit 06020001, 0.2 mile below Standifer Gap Road, 2.2 miles southeast of Summit.	1.91		5-20-86 *0.1
03596780 Garrison Fork	Duck River to Tennessee River	Lat 35°35'02", long 86°15'27", Bedford County, Hydrologic Unit 06040002, at county road bridge 0.2 miles above Lee Branch, 2.0 miles north- east of Fairfield.	32.27		7-24-86 *.62
03596980 Noah Fork	Garrison Fork to Duck River to Tennessee River	Lat 35°34'00", long 86°16'00", Bedford County, Hydrologic Unit 06040002, 0.6 mile above confluence of Garrison Fork, 1.1 miles east of Fairfield.	27.3		7-24-86 *3.1
03597170 Garrison Fork	Duck River to Tennessee River	Lat 35°31'37", long 86°18'40", Bedford County, Hydrologic Unit 06040002, 1.3 miles east of Wartrace, and at mile 5.1.	78.44		7-24-86 *3.0
03597220 Garrison Fork	Duck River to Tennessee River	Lat 35°30'38", long 86°19'20", Bedford County, Hydrologic Unit 06040002, at county road and L and N railroad bridge, 1.2 miles southeast of Wartrace, and at mile 3.3.	85.5	1967, 1971-72, 1975	7-24-86 *3.3

## Springs

In 1931 a study of large springs in Tennessee was made and the results published in WSP 713. From 1950 to 1954 a more detailed study, including some of these springs, was made. Results of this study and all subsequent spring measurements were published annually in WSP's from 1950 to 1960. Since 1960 results of measurements have been published in annual State reports. Measurements made in the 1986 water year are given in the following table.

## Discharge measurement of springs during water year 1986

Site number and name	Location	Tributary to	Date	Discharge (gpm)	Discharge (ft <sup>3</sup> /sec)
Dickson County					
03434615 Baker Spring	Lat 36°10'54", long 87°19'00", Hydrologic Unit 05130204, 1.3 miles east of Charlotte at north edge of State Highway 49.	Town Branch to Jones Creek to Harpeth River to Cumberland River	10-11	150	.33
Hickman County					
03602323 McFarlin Spring	Lat 35°53'00", long 87°22'12", Hydrologic Unit 06040003, 1.8 miles southwest of Wrigley.	Unnamed tributary to Mill Creek to Piney River to Duck River to Tennessee River	10- 8 11-13	240 240	.54 .54
Lawrence County					
03588220 Callahan Branch Spring	Lat 35°10'44", long 87°20'47", Hydrologic Unit 06030005, 1.4 miles north of Leoma, 4.3 miles south of Lawrenceburg.	Callahan Branch to Shoal Creek to Tennessee River	10- 8 11-13	170 165	.38 .37
Macon County					
03312235 Sabins Spring	Lat 36°30'40", long 85°50'49", Hydrologic Unit 05110002, 1.5 miles south of Red Boiling Springs at left bank of Salt Lick Creek.	Salt Lick Creek to Barren River to Green River	10- 7 11-12	690 1,120	1.53 2.49
03312240 Cordelle Hudson	Lat 36°30'48", long 85°50'20", Hydrologic Unit 05110002, 1.5 miles southeast of Red Boiling Springs.	Unnamed tributary to Salt Lick Creek to Barren River to Green River	10- 7 11-12	210 370	.46 .82
03312250 Red Boiling Springs	Lat 36°32'12", long 85°51'06", Hydrologic Unit 05110002, 0.3 mile northwest of Red Boiling Springs.	Salt Lick Creek to Barren River to Green River	10- 7	420	.93
03312410 Horace White Spring	Lat 36°35'01", long 86°02'38", Hydrologic Unit 05110002, 4.0 miles northeast of Lafayette, 4.6 miles west of Galen.	Spring Creek to Puncheon Creek to Barren River to Green River	10- 7 11-12	510 760	1.14 1.70
03312420 Adams Spring	Lat 36°37'20", long 85°58'35", Hydrologic Unit 05110002, 7.0 miles north of Lafayette, 3.1 miles northwest of Galen.	Unnamed tributary to Puncheon Creek to Barren River to Green River	10- 7 11-12	280 340	.63 .75
Stewart County					
034369821 Brandon Spring	Lat 36°33'33", long 87°46'53", Hydrologic Unit 05130205, 1.9 miles southwest of Big Rock, 4.3 miles southeast of Bumpus Mills.	Dyers Creek to Cumberland River	3-26	300	.66
03437140 Melton Spring	Lat 36°34'15", long 87°49'28", Hydrologic Unit 05130205, 2.5 miles south of Bumpus Mills.	Hayes Fork Creek to Saline Creek to Cumberland River	3-26	470	1.04
Williamson County					
03430430 Ragsdale Spring	Lat 35°57'20", long 86°43'59", Hydrologic Unit 05130202, 3.5 miles west of Nolensville.	Owl Creek Tributary to Owl Creek to Mill Creek to Cumberland River	5-10	30	.07
03432850 Farrar Spring	Lat 35°56'51", long 86°45'24", Hydrologic Unit 05130204, 1.7 miles northeast of Clovercroft, 3.1 miles southeast of inter- section of Moores Lane and I-65.	Little Harpeth River to Harpeth River to Cumberland River	5-10	45	.10



## DISCHARGE AT PARTIAL RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurement of springs during water year 1986--continued

Site number and name	Location	Tributary to	Date	Discharge	
				(gpm)	(ft <sup>3</sup> /sec)
Williamson County--continued					
03432860 Hackett Spring	Lat 35°57'10", long 86°45'57", Hydrologic Unit 05130204, 2.0 miles north Clovercroft, 2.5 miles east of intersection of Moores Lane and I-65.	Little Harpeth River to Harpeth River to Cumberland River	5-10	13	.03
03432868 Smith Spring	Lat 35°57'10", long 86°46'03", Hydrologic Unit 05130204, 2.0 miles north of Clovercroft, 2.4 miles east of intersection of Moores Lane and I-65.	Little Harpeth River to Harpeth River To Cumberland River	5-10	220	.50
03432873 Kennon Spring	Lat 35°57'39", long 86°45'28", Hydrologic Unit 05130204, 2.6 miles north of Clovercroft, 2.8 miles east of intersection of Moores Lane and I-65.	Little Harpeth River Tributary to Little Harpeth River to Harpeth River to Cumberland River	5-10	25	.06
03432329 Spring number 16	Lat 35°55'45", long 86°45'13", Hydrologic Unit 05130204, above County Road, 0.8 mile northeast of Clovercroft.	Mayes Creek Tributary to Mayes Creek to Harpeth River to Cumberland River	5-10	25	.06

## Stewart County, TN (Stewart County), seepage investigations

A series of low-flow discharge measurements were made March 26, 1986, in Stewart County, TN, to define the losing and gaining reaches of streams draining the area at base flow conditions. In addition, measurements of water temperature and specific conductance were taken at each site. The area studied included Cub Creek basin from mile 2.2 to mile 4.2 and Dyers Creek basin from mile 3.3 to mile 10.8. The measurements were made during a period of constant base flow. Tributary flow was considered a contribution and not a gain.

Cub Creek Mile	Site number and stream	Location	Drainage Area (mi <sup>2</sup> )	Meas. disch. (ft <sup>3</sup> /s)	Cub Creek gain or loss	Water temp. (°C)	Specific conductance (us/cm)
4.2	03436956 Cub Creek	Lat 36°32'07", long 87°43'04", Stewart County, Hydrologic Unit 05130205, 1.7 miles southwest of Legate, 2.7 miles northwest of Indian Mound.	0.99	0.37	---	17.0	275
3.8	034369563 Cub Creek	Lat 36°31'49", long 87°43'15", Stewart County, Hydrologic Unit 05130205, at county road, 2.1 miles southwest of Legate, 2.5 miles northwest of Indian Mound.	1.27	0.90	+5.3	16.0	305
3.2	034369567 Cub Creek Tributary	Lat 36°31'26", long 87°43'31", Stewart County, Hydrologic Unit 05130205, at culvert under county road, 2.3 miles northwest of Indian Mound, 2.6 miles south- west of Legate, and at mile 0.2.	0.21	0.24	---	16.0	240
3.1	03436957 Cub Creek	Lat 36°31'27", long 87°43'51", Stewart County, Hydrologic Unit 05130205, at county road bridge, 2.6 miles northwest of Indian Mound, 2.8 miles southwest of Legate.	2.06	1.84	+7.0	16.0	300
2.9	034369572 Lewis Branch	Lat 36°31'34", long 87°43'53", Stewart County, Hydrologic Unit 05130205, at county road bridge, 2.7 miles southwest of Legate, 2.7 miles northwest of Indian Mound, and at mile 0.2.	1.15	1.28	---	15.0	310
2.9	034369574 Lewis Branch Tributary	Lat 36°32'25", long 87°44'22", Stewart County, Hydrologic Unit 05130205, 2.5 miles west of Legate, 3.7 miles northwest of Indian Mound, and at mile 1.2.	0.58	0.18	---	13.5	240
2.9	034369576 Lewis Branch Tributary	Lat 36°32'05", long 87°44'04", Stewart County, Hydrologic Unit 05130205, 2.4 miles southwest of Legate, 3.2 miles northwest of Indian Mound, and at mile 0.7.	1.00	0.56	---	13.0	210
2.9	034369578 Cub Creek Tributary	Lat 36°31'22", long 87°43'56", Stewart County, Hydrologic Unit 05130205, at mouth, 2.6 miles northwest of Indian Mound, 2.9 miles southwest of Legate.	0.29	0.23	---	15.0	100
2.8	03436958 Cub Creek	Lat 36°31'19", long 87°44'03", Stewart County, Hydrologic Unit 05130205, at county road bridge, 2.7 miles northwest of Indian Mound, 3.0 miles southwest of Legate.	4.83	5.10	+1.19	17.5	260
2.2	034369585 Cub Creek Tributary	Lat 36°31'02", long 87°44'28", Stewart County, Hydrologic Unit 05130205, at mouth, 2.9 miles west of Indian Mound, 3.5 miles southwest of Legate.	0.24	0.06	---	17.0	210
2.2	034369593 Cub Creek Tributary	Lat 36°32'01", long 87°44'59", Stewart County, Hydrologic Unit 05130205, 3.2 miles southwest of Legate, 3.8 miles northwest of Indian Mound, and at mile 1.4.	0.35	0.30	---	13.0	260
2.2	034369595 Cub Creek Tributary	Lat 36°31'45", long 87°44'41", Stewart County, Hydrologic Unit 05130205, 3.1 miles southwest of Legate, 3.4 miles northwest of Indian Mound, and at mile 0.9.	0.79	0.36	---	13.5	184

## Stewart County, TN (Stewart County), seepage investigations--continued

Cub Creek Mile	Site number and stream	Location	Drainage Area (mi <sup>2</sup> )	Meas. disch. (ft <sup>3</sup> /s)	Cub Creek gain or loss	Water temp. (°C)	Specific conductance (us/cm)
2.2	034369597 Cub Creek Tributary	Lat 36°31'01", long 87°44'34", Stewart County, Hydrologic Unit 05130205, at mouth at county road bridge, 2.9 miles west of Indian Mound, 3.6 miles south- west of Legate.	1.15	1.20	---	12.0	195
2.2	034369598 Cub Creek	Lat 36°31'01", long 87°44'33", Stewart County, Hydrologic Unit 05130205, 2.9 miles west of Indian Mound, 3.6 miles south of Legate.	6.49	6.47	+1.11	13.0	280
Dyers Creek Mile					Dyers Creek gain or loss		
10.8	034369812 Dyers Creek	Lat 36°34'53", long 87°45'28", Stewart County, Hydrologic Unit 05130205, 0.6 mile south of State Highway 120, 4.7 miles east of Bumpus Mills.	1.52	0.81	---	13.5	265
9.6	034369814 Dyers Creek	Lat 36°34'51", long 87°45'39", Stewart County, Hydrologic Unit 05130205, 0.5 mile south of Smith Cemetery, 4.5 miles east of Bumpus Mills.	2.17	1.09	+2.28	14.0	260
8.5	034369816 Dyers Creek Tributary	Lat 36°34'15", long 87°46'29", Stewart County, Hydrologic Unit 05130205, 300 ft above mouth, 1.1 miles southwest of Big Rock, 4.1 miles southeast of Bumpus Mills.	0.15	0.00	---	---	---
8.5	034369817 Dyers Creek	Lat 36°34'13", long 87°46'26", Stewart County, Hydrologic Unit 05130205, 1.1 miles southwest of Big Rock, 4.1 miles southeast of Bumpus Mills.	3.20	2.23	+1.14	13.0	250
8.0	034369818 Dyers Creek Tributary	Lat 36°33'55", long 87°46'40", Stewart County, Hydrologic Unit 05130205, 300 ft above mouth, 1.4 miles southwest of Big Rock, 4.2 miles southeast of Bumpus Mills.	0.12	0.00	---	---	---
8.0	034369819 Dyers Creek Tributary	Lat 36°33'53", long 87°46'42", Stewart County, Hydrologic Unit 05130205, 500 ft above mouth, 1.5 miles southwest of Big Rock, 4.2 miles southeast of Bumpus Mills.	0.18	0.00	---	---	---
7.8	03436982 Dyers Creek	Lat 36°33'42", long 87°46'40", Stewart County, Hydrologic Unit 05130205, at county road bridge, 1.6 miles southeast of Big Rock, 4.3 miles southwest of Bumpus Mills.	3.72	2.53	+3.30	14.0	255
7.5	034369823 Dyers Creek Tributary	Lat 36°33'46", long 87°44'54", Stewart County, Hydrologic Unit 05130205, at U.S. Highway 79 bridge, 0.7 mile east of Big Rock, 2.8 miles west of Legate, and at mile 2.0.	1.06	0.08	---	11.5	55
7.5	034369824 Dyers Creek Tributary	Lat 36°33'48", long 87°45'16", Stewart County, Hydrologic Unit 05130205, at county road bridge, 1.2 miles south of Big Rock, and at mile 1.6.	1.24	0.13	---	15.0	90
7.5	034369826 Dyers Creek Tributary	Lat 36°33'36", long 87°46'10", Stewart County, Hydrologic Unit 05130205, at county road bridge, 1.5 miles south of Big Rock, 4.8 miles southeast of Bumpus Mills, and at mile 0.8.	2.23	0.36	---	15.0	88

Stewart County, TN (Stewart County), seepage investigations--continued

Dyers Creek Mile	Site number and stream	Location	Drainage Area (mi <sup>2</sup> )	Meas. disch. (ft <sup>3</sup> /s)	Dyers Creek gain or loss	Water temp. (°C)	Specific conductance (us/cm)
7.5	034369827 Unnamed Tributary to Dyers Creek Tributary	Lat 36°33'30", long 87°46'21", Stewart County, Hydrologic Unit 05130205, 100 ft above mouth, 1.7 miles south of Big Rock, 4.7 miles southeast of Bumpus Mills.	0.64	0.63	---	19.5	190
7.5	034369828 Dyers Creek Tributary	Lat 36°33'32", long 87°46'38", Stewart County, Hydrologic Unit 05130205, at county road bridge, 1.8 miles southwest of Big Rock, 4.5 miles southeast of Bumpus Mills, and at mile 0.3.	3.41	0.76	---	17.0	165
7.4	03436983 Dyers Creek	Lat 36°33'31", long 87°46'57", Stewart County, Hydrologic Unit 05130205, 1.2 miles north of Keatts Cemetery, 2.0 miles southwest of Big Rock.	7.46	6.96	+3.67	17.0	230
7.0	034369831 Dyers Creek	Lat 36°33'17", long 87°47'10", Stewart county, Hydrologic Unit 05130205, 150 ft above U.S. Highway 79 bridge, 2.3 miles southwest of Big Rock.	7.77	8.87	+1.91	18.0	215
7.0	034369832 Dyers Creek Tributary	Lat 36°33'59", long 87°47'26", Stewart County, Hydrologic Unit 05130205, 1.9 miles southwest of Big Rock, 3.6 miles southeast of Bumpus Mills, and at mile 0.9.	0.25	0.22	---	16.5	130
7.0	034369833 Dyers Creek Tributary	Lat 36°33'26", long 87°47'18", Stewart County, Hydrologic Unit 05130205, 2.3 miles southwest of Big Rock, 4.1 miles southeast of Bumpus Mills, and at mile 0.2.	0.63	0.41	---	15.0	140
7.0	034369834 Unnamed Tributary to Dyers Creek Tributary	Lat 36°33'25", long 87°47'19", Stewart County, Hydrologic Unit 05130205, at mouth, 2.3 miles southwest of Big Rock, 4.1 miles southeast of Bumpus Mills.	0.38	0.24	---	15.0	120
6.5	034369835 Dyers Creek	Lat 36°32'54", long 87°47'22", Stewart County, Hydrologic Unit 05130205, 1.0 mile west of Keatts Cemetery, 2.8 miles southwest of Big Rock.	9.05	9.96	+4.44	15.0	211
6.1	034369836 Dyers Creek Tributary	Lat 36°32'50", long 87°47'43", Stewart County, Hydrologic Unit 05130205, at bridge on U.S. High- way 79, 3.0 miles southwest of Big Rock, and at mile 0.2.	0.42	0.12	---	12.0	188
6.0	034369837 Dyers Creek	Lat 36°32'36", long 87°47'48", Stewart County, Hydrologic Unit 05130205, at county road bridge, 3.3 miles southwest of Big Rock.	10.4	11.1	+1.02	18.0	220
5.9	034369838 Dyers Creek Tributary	Lat 36°32'35", long 87°47'51", Stewart County, Hydrologic Unit 05130205, at mouth, 1.4 miles west of Keatts Cemetery, 3.3 miles southwest of Big Rock.	0.49	0.28	---	15.0	130
5.8	034369839 Dyers Creek Tributary	Lat 36°32'31", long 87°47'50", Stewart County, Hydrologic Unit 05130205, at mouth, 3.4 miles southwest of Big Rock, 4.5 miles northeast of Dover.	0.34	0.01	---	16.5	50
5.5	03436984 Dyers Creek Tributary	Lat 36°32'27", long 87°48'08", Stewart County, Hydrologic Unit 05130205, at U.S. Highway 79 bridge, 3.6 miles southwest of Big Rock, 4.3 miles northeast of Dover.	0.12	0.00	---	---	---



## CUMBERLAND RIVER BASIN

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Stewart County, TN (Stewart County), seepage investigations--continued

Dyers Creek Mile	Site number and stream	Location	Drainage Area (mi <sup>2</sup> )	Meas. disch. (ft <sup>3</sup> /s)	Dyers Creek gain or loss	Water temp. (°C)	Specific conductance (us/cm)
4.9	034369841 Dyers Creek Tributary	Lat 36°32'04", long 87°48'33", Stewart County, Hydrologic Unit 05130205, at U.S. Highway 79 bridge, 3.7 miles north of Dover, and at mile 0.1.	0.79	0.28	---	16.5	40
4.3	034369842 Dyers Creek	Lat 36°31'42", long 87°48'52", Stewart County, Hydrologic Unit 05130205, at U.S. Highway 79 bridge, 3.2 miles north of Dover, 4.7 miles southwest of Big Rock.	13.20	15.00	+3.33	15.5	220

## Brentwood, TN (Williamson County), seepage investigations

A series of low-flow discharge measurements were made April 10, 1986, in the vicinity of Brentwood, TN (Williamson County), to define the losing and gaining reaches of streams draining the area at base flow conditions. In addition, measurements of water temperature and specific conductance were taken at each site. The area studied included the main stem of the Little Harpeth River and its tributaries from mile 13.9 to mile 16.0. The measurements were made during a period of constant base flow. Tributary flow was considered a contribution and not a gain.

Little Harpeth River Mile	Site number and stream	Location	Drainage Area (mi <sup>2</sup> )	Meas. disch. (ft <sup>3</sup> /s)	Little Harpeth River gain or loss	Water temp. (°C)	Specific conductance (us/cm)
16.0	03432852 Little Harpeth River Tributary	Lat 35°56'59", long 86°45'21", Williamson County, Hydrologic Unit 05130204, at Splitlog Road, 1.9 miles northeast of Clovercroft, and at mile 0.1.	0.17	0.0	---	---	---
15.8	03432854 Little Harpeth River	Lat 35°56'60", long 86°45'43", Williamson County, Hydrologic Unit 05130204, at Splitlog Road, 1.8 miles north of Clovercroft.	.71	.52	+ .52	13.0	360
15.5	03432856 Little Harpeth River	Lat 35°57'07", long 86°45'47", Williamson County, Hydrologic Unit 05130204, 1.9 miles north of Clovercroft, 2.7 miles southeast of intersection of Moores Lane and I-65.	0.77	0.47	- .05	14.0	370
15.5	03432857 Little Harpeth River Tributary	Lat 35°57'09", long 86°45'19", Williamson County, Hydrologic Unit 05130204, 2.1 miles northeast of Clovercroft, 3.1 miles east of intersection of Moores Lane and I-65, and at mile 0.5.	0.27	0.0	---	---	---
15.5	03432858 Little Harpeth River Tributary	Lat 35°57'08", long 86°45'47", Williamson County, Hydrologic Unit 05130204, at mouth, 2.0 miles north of Clovercroft, 2.7 miles east of intersection of Moores Lane and I-65.	0.43	0.01	---	12.0	418
15.3	03432861 Little Harpeth River	Lat 35°57'08", long 86°45'59", Williamson County, Hydrologic Unit 05130204, at Wilson Pike, 2.0 miles north of Clovercroft.	1.23	0.71	+ .23	9.5	360
15.3	03432863 Little Harpeth River Tributary	Lat 35°56'51", long 86°46'04", Williamson County, Hydrologic Unit 05130204, 1.6 miles north of Clovercroft, 2.6 miles southeast of intersection of Moores Lane and I-65, and at mile 0.4.	0.57	0.0	---	---	---
15.3	03432865 Unnamed Tributary to Little Harpeth River Tributary	Lat 35°56'50", long 86°46'06", Williamson County, Hydrologic Unit 05130204, 1.6 miles north of Clovercroft, 2.5 miles southeast of intersection of Moores Lane and I-65, and at mile 0.1.	0.24	0.08	---	19.0	395
15.3	03432867 Little Harpeth River Tributary	Lat 35°57'06", long 86°46'00", Williamson County, Hydrologic Unit 05130204, at mouth, 1.9 miles north of Clovercroft, 2.5 miles southeast of intersection of Moores Lane and I-65.	0.90	0.0	---	---	---
15.0	03432870 Little Harpeth River	Lat 35°57'21", long 86°46'09", Williamson County, Hydrologic Unit 05130204, 2.2 miles north of Clovercroft, 2.3 miles east of intersection of Moores Lane and I-65.	2.58	1.16	+ .45	15.0	380
14.6	03432872 Little Harpeth River	Lat 35°57'37", long 86°46'19", Williamson County, Hydrologic Unit 05130204, 2.0 miles east of intersection of Moores Lane and I-65, 2.5 miles north of Clovercroft.	2.67	0.81	- .35	16.5	360

## CUMBERLAND RIVER BASIN

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Brentwood, TN (Williamson County), seepage investigations--continued

Little Harpeth River Mile	Site number and stream	Location	Drainage Area (mi <sup>2</sup> )	Meas. disch. (ft <sup>3</sup> /s)	Little Harpeth River gain or loss	Water temp. (°C)	Specific conductance (us/cm)
14.6	034328728 Little Harpeth River Tributary	Lat 35°57'39", long 86°46'20", Williamson County, Hydrologic Unit 05130204, at mouth, 2.0 miles east of intersection of Moores Lane and I-65, 2.5 miles north of Clovercroft.	1.44	0.20	---	17.0	430
14.6	03432874 Little Harpeth River Tributary	Lat 35°57'39", long 86°45'58", Williamson County, Hydrologic Unit 05130204, 2.3 miles east of intersection of Moores Lane and I-65, 2.5 miles north of Clovercroft, and at mile 0.3.	0.44	0.10	---	13.5	435
14.6	03432875 Little Harpeth River Tributary	Lat 35°57'38", long 86°46'17", Williamson County, Hydrologic Unit 05130204, at mouth, 2.0 miles east of intersection of Moores Lane and I-65, 2.5 miles north of Clovercroft.	0.53	0.13	---	15.5	430
14.4	03432877 Little Harpeth River Tributary	Lat 35°57'46", long 86°46'18", Williamson County, Hydrologic Unit 05130204, 400 feet above mouth, at Wilson Pike, 2.0 miles east of intersection of Moores Lane and I-65.	0.01	0.05	---	16.0	360
14.3	03432878 Little Harpeth River Tributary	Lat 35°57'51", long 86°46'19", Williamson County, Hydrologic Unit 05130204, 450 feet above mouth, at Wilson Pike, 2.0 miles east of intersection of Moores Lane and I-65, 2.7 miles north of Clovercroft.	0.29	0.0	---	---	---
14.0	03432880 Little Harpeth River Tributary	Lat 35°58'05", long 86°46'23", Williamson County, Hydrologic Unit 05130204, 700 ft above mouth, at Wilson Pike, 1.9 miles east of intersection of Moores Lane and I-65.	0.25	0.02	---	12.0	370
13.9	03432882 Little Harpeth River Tributary	Lat 35°58'07", long 86°46'38", Williamson County, Hydrologic Unit 05130204, at mouth, 1.7 miles east of intersection of Moores Lane and I-65, 3.2 miles north of Clovercroft.	0.55	0.53	---	14.5	440
13.9	03432883 Little Harpeth River	Lat 35°58'08", long 86°46'38", Williamson County, Hydrologic Unit 05130204, below Moores Lane, 1.7 miles east of intersection of Moores Lane and I-65, 3.2 miles north of Clovercroft.	5.99	2.49	+ .75	10.5	425

## Spring Hill, TN (Maury and Williamson Counties), seepage investigations

A series of low-flow discharge measurements were made June 26, 1986, in the vicinity of Spring Hill, TN (Maury and Williamson Counties), to define the losing and gaining reaches of streams draining the area at base flow conditions. In addition, measurements of water temperature and specific conductance were taken at each site. The area studied included Carters Creek basin from mile 3.3 and Rutherford Creek basin from mile 11.6 to mile 21.2. The measurements were made during a period of constant base flow. Tributary flow was considered a contribution and not a gain.

Carters Creek Mile	Site number and stream	Location	Drainage Area (mi <sup>2</sup> )	Meas. disch. (ft <sup>3</sup> /s)	Carters Creek gain or loss	Water temp. (°C)	Specific conductance (us/cm)
5.5	036000842 Carters Creek	Lat 35°44'18", long 86°59'20", Maury County, Hydrologic Unit 06040003, 1.5 miles north of Carters Creek, 2.1 miles north- west of Neapolis, 3.4 miles southwest of Spring Hill.	12.8	1.04	---	22.5	385
5.5	036000844 Walden Branch	Lat 35°44'18", long 86°59'19", Maury County, Hydrologic Unit 06040003, at mouth, 1.5 miles north of Carters Creek, 2.1 miles northwest of Neapolis, 3.4 miles southwest of Spring Hill.	3.14	0.02	---	21.0	370
5.1	036000846 Carters Creek Tributary	Lat 35°44'01", long 86°59'26", Maury County, Hydrologic Unit 06040003, at mouth, at bridge on Petty Lane, 1.2 miles north of Carters Creek, 1.9 miles northwest of Neapolis, 3.6 miles southwest of Spring Hill.	0.21	0	---	---	---
4.8	036000848 Carters Creek Tributary	Lat 35°43'46", long 86°59'26", Maury County, Hydrologic Unit 06040003, 350 feet above mouth, at bridge on Petty Lane, 0.9 mile north of Carters Creek, 1.6 miles northwest of Neapolis, 3.7 miles southwest of Spring Hill.	0.11	0.08	---	19.5	375
4.7	03600085 Carters Creek	Lat 35°43'40", long 86°59'20", Maury County, Hydrologic Unit 06040003, at bridge on Petty Lane, 0.8 mile north of Carters Creek, 1.5 miles northwest of Neapolis, 3.7 miles southwest of Spring Hill.	16.6	1.62	+4.8	22.0	390
4.6	036000852 Carters Creek Tributary	Lat 35°44'12", long 86°58'17", Maury County, Hydrologic Unit 06040003, at bridge on Kleburne Road, 1.9 miles northeast of Carters Creek, 1.9 miles north of Neapolis, 2.6 miles south- west of Spring Hill, and at mile 1.3.	0.79	0.01	---	19.5	395
4.6	036000853 Unnamed Tributary to Carters Creek Tributary	Lat 35°44'11", long 86°58'17", Maury County, Hydrologic Unit 06040003, at mouth, 1.9 miles northeast of Carters Creek, 1.9 miles north of Neapolis, 2.6 miles southwest of Spring Hill.	0.08	<0.01	---	23.0	740
4.6	036000854 Unnamed Tributary to Carters Creek Tributary	Lat 35°44'15", long 86°58'25", Maury County, Hydrologic Unit 06040003, at bridge on Kleburne Road, 1.8 miles northeast of Carters Creek, 1.9 miles north of Neapolis, 2.6 miles southwest of Spring Hill, and at mile 0.1.	0.86	0.05	---	21.0	360
4.6	036000856 Carters Creek Tributary	Lat 35°43'53", long 86°58'56", Maury County, Hydrologic Unit 06040003, 1.2 miles northeast of Carters Creek, 1.5 miles north of Neapolis, 3.2 miles southwest of Spring Hill, and at mile 0.6.	2.18	0.13	---	22.0	395



## Spring Hill, TN (Maury and Williamson Counties), seepage investigations--continued

Carters Creek Mile	Site number and stream	Location	Drainage Area (mi <sup>2</sup> )	Meas. disch. (ft <sup>3</sup> /s)	Carters Creek gain or loss	Water temp. (°C)	Specific conductance (us/cm)
4.6	036000858 Unnamed Tributary to Carters Creek Tributary	Lat 35°43'41", long 86°59'07", Maury County, Hydrologic Unit 06040003, at mouth, 0.9 mile northeast of Carters Creek, 1.4 miles northwest of Neapolis, 3.5 miles southwest of Spring Hill.	0.42	<0.01	---	20.0	370
4.6	03600086 Carters Creek Tributary	Lat 35°43'34", long 86°59'20", Maury County, Hydrologic Unit 06040003, 100 feet above mouth, at culvert on Carters Creek road, 0.7 mile north of Carters Creek, 1.4 miles northwest of Neapolis, 3.7 miles southwest of Spring Hill.	2.94	0.33	---	21.0	360
3.7	03600088 Carters Creek	Lat 35°43'03", long 86°59'45", Maury County, Hydrologic Unit 06040003, at bridge on Butler road, 0.1 mile west of Carters Creek.	20.1	1.81	-.14	23.5	380
3.4	03600089 Terrell Branch	Lat 35°42'49", long 86°59'54", Maury County, Hydrologic Unit 06040003, at mouth, 0.3 mile southwest of Carters Creek, 1.4 miles west of Neapolis, 4.6 miles southwest of Spring Hill.	5.15	0.36	---	22.0	385
3.3	036000897 Carters Creek Tributary	Lat 35°42'46", long 86°59'53", Maury County, Hydrologic Unit 06040003, at mouth, 0.3 mile southwest of Carters Creek, 1.4 miles west of Neapolis, 4.6 miles southwest of Spring Hill.	0.31	0.03	---	19.0	395
3.3	03600090 Carters Creek	Lat 35°42'46", long 86°59'53", Maury County, Hydrologic Unit 06040003, 0.3 mile southwest of Carters Creek, 1.4 miles west of Neapolis, 4.6 miles southwest of Spring Hill.	25.8	2.30	+ .10	21.0	385
Rutherford Creek Mile					Rutherford Creek gain or loss		
21.2	03599950 Rutherford Creek	Lat 35°42'41", long 86°53'56", Maury County, Hydrologic Unit 06040003, at county road bridge, 150 feet above Crooked Creek, 0.6 mile north of Kedron.	19.7	2.10	---	23.5	415
20.0	03599953 Rutherford Creek	Lat 35°42'54", long 86°54'44", Maury County, Hydrologic Unit 06040003, 1.1 miles northwest of Kedron, 2.6 miles south of Spring Hill, 3.5 miles east of Neapolis.	24.1	2.07	-.03	25.0	400
20.0	03599960 Aenon Creek	Lat 35°43'39", long 86°54'21", Maury County, Hydrologic Unit 06040003, at bridge on John Lund road, 2.1 miles southeast of Spring Hill, and at mile 1.6.	14.2	2.08	---	22.0	435
20.0	03599963 Aenon Creek	Lat 35°42'54", long 86°54'44", Maury County, Hydrologic Unit 06040003, at mouth, 1.1 miles northwest of Kedron, 2.6 miles south of Spring Hill, 3.5 miles east of Neapolis.	15.1	2.56	---	23.0	415

## Spring Hill, TN (Maury and Williamson Counties), seepage investigations--continued

Rutherford Creek Mile	Site number and stream	Location	Drainage Area (mi <sup>2</sup> )	Meas. disch. (ft <sup>3</sup> /s)	Rutherford Creek gain or loss	Water temp. (°C)	Specific conductance (us/cm)
19.7	03599965 Rutherford Creek	Lat 35°42'57", long 86°55'02", Maury County, Hydrologic Unit 06040003, at county road bridge, 2.5 miles southeast of Spring Hill.	39.3	4.22	-.41	21.0	400
19.4	035999655 Rutherford Creek	Lat 35°42'58", long 86°55'12", Maury County, Hydrologic Unit 06040003, 1.5 miles northwest of Kedron, 2.5 miles south of Spring Hill, 3.1 miles east of Neapolis.	39.4	4.55	+.33	21.0	445
19.3	03599966 McCutcheon Creek	Lat 35°45'29", long 86°55'24", Williamson County, Hydrologic Unit 06040003, at State Hwy 31 bridge, 0.7 mile northeast of Spring Hill, and at mile 3.4.	3.08	0.44	---	23.0	415
19.3	03599967 McCutcheon Creek	Lat 35°44'28", long 86°55'30", Maury County, Hydrologic Unit 06040003, at Spring Hill, 3.1 miles northwest of Kedron, 3.5 miles northeast of Neapolis, and at mile 2.0.	4.25	0.63	---	18.5	470
19.3	03599968 McCutcheon Creek	Lat 35°44'37", long 86°56'21", Maury County, Hydrologic Unit 06040003, below State Hwy 31 bridge, at Spring Hill, 3.1 miles northeast of Neapolis, 3.6 miles northwest of Kedron, and at mile 0.9.	3.12	0.10	---	29.0	360
19.3	03599969 McCutcheon Creek Tributary	Lat 35°44'28", long 86°55'30", Maury County, Hydrologic Unit 06040003, at mouth, at Spring Hill, 3.1 miles northwest of Kedron, 3.5 miles northeast of Neapolis.	4.81	0.20	---	18.0	460
19.3	03599970 McCutcheon Creek	Lat 35°43'40", long 86°55'28", Maury County, Hydrologic Unit 06040003, at bridge on John Lund road, 1.6 miles southeast of Spring Hill, 2.3 miles north- west of Kedron, and at mile 1.0.	10.2	1.07	---	21.0	445
19.3	03599971 McCutcheon Creek	Lat 35°42'56", long 86°55'16", Maury County, Hydrologic Unit 06040003, 400 feet above mouth, 1.6 miles northwest of Kedron, 2.5 miles south of Spring Hill, 3.0 miles east of Neapolis.	11.0	1.20	---	21.0	408
17.5	03599972 Rutherford Creek Tributary	Lat 35°43'06", long 86°56'06", Maury County, Hydrologic Unit 06040003, at bridge on Denning Road, 2.3 miles northwest of Kedron, 2.3 miles south of Spring Hill, 2.3 miles north- east of Neapolis, and at mile 0.8.	0.19	0	---	---	---
17.5	03599973 Rutherford Creek Tributary	Lat 35°42'28", long 86°56'03", Maury County, Hydrologic Unit 06040003, at mouth, 2.0 miles west of Kedron, 2.3 miles east of Neapolis, 3.0 miles south of Spring Hill.	0.69	0.10	---	21.0	420
17.5	03599974 Rutherford Creek	Lat 35°42'28", long 86°56'03", Maury County, Hydrologic Unit 06040003, 2.0 miles west of Kedron, 2.3 miles east of Neapolis, 3.0 miles south of Spring Hill.	52.9	6.22	+.37	23.5	405
15.8	03599975 Rutherford Creek	Lat 35°42'04", long 86°56'50", Maury County, Hydrologic Unit 06040003, 1.6 miles southeast of Neapolis, 2.7 miles west of Kedron, 3.6 miles southwest of Spring Hill.	54.3	6.94	+.72	23.0	420

## TENNESSEE RIVER BASIN

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Spring Hill, TN (Maury and Williamson Counties), seepage investigations--continued

Rutherford Creek Mile	Site number and stream	Location	Drainage Area (mi <sup>2</sup> )	Meas. disch. (ft <sup>3</sup> /s)	Rutherford Creek gain or loss	Water temp. (°C)	Specific conductance (us/cm)
15.5	03599976 Johnson Branch	Lat 35°43'26", long 86°57'14", Maury County, Hydrologic Unit 06040003, 1.5 miles northeast of Neapolis, 2.3 miles east of Carters Creek, 2.3 miles south- west of Spring Hill, and at mile 1.6.	0.84	0.09	---	18.0	400
15.5	03599977 Johnson Branch	Lat 35°42'58", long 86°57'18", Maury County, Hydrologic Unit 06040003, at bridge on Denning Road, 1.2 miles northeast of Neapolis, 2.2 miles east of Carters Creek, 2.8 miles south- west of Spring Hill, and at mile 1.1.	1.60	0.17	---	21.0	420
15.5	03599978 Johnson Branch	Lat 35°42'23", long 86°57'04", Maury County, Hydrologic Unit 06040003, 1.3 miles east of Neapolis, 3.0 miles west of Kedron, 3.3 miles southwest of Spring Hill, and at mile 0.3.	2.28	0.24	---	23.0	470
14.2	03599979 Rutherford Creek Tributary	Lat 35°41'30", long 86°56'43", Maury County, Hydrologic Unit 06040003, at bridge on Greens Mill Road, 2.1 miles southeast of Neapolis, 2.7 miles south- west of Kedron, 4.1 miles south of Spring Hill, and at mile 0.1.	0.74	0.18	---	19.0	320
13.9	03599980 Rutherford Creek	Lat 35°41'36", long 86°57'07", Maury County, Hydrologic Unit 06040003, at bridge on Greens Mill Road, 0.4 mile west of Lanton Church, 1.7 miles south- east of Neapolis, 3.0 miles west of Kedron, 4.1 miles south of Spring Hill.	58.2	7.10	-.26	25.0	390
12.2	03599985 Rutherford Creek Tributary	Lat 35°42'39", long 86°58'01", Maury County, Hydrologic Unit 06040003, 0.4 miles east of Neapolis, 1.6 miles southeast of Carters Creek, 3.5 miles southwest of Spring Hill, and at mile 1.6.	0.21	0.10	---	17.0	390
12.2	03599988 Rutherford Creek Tributary	Lat 35°41'42", long 86°57'43", Maury County, Hydrologic Unit 06040003, at bridge on Greens Mill Road, 1.2 miles southeast of Neapolis, 3.6 miles west of Kedron, 4.2 miles southwest of Spring Hill, and at mile 0.4.	1.02	0.03	---	26.0	310
11.6	03599993 Rutherford Creek	Lat 35°41'41", long 86°58'14", Maury County, Hydrologic Unit 06040003, at bridge on county road, 1.1 miles south of Neapolis, 2.1 miles southeast of Carters Creek, 4.1 miles west of Kedron.	60.7	7.47	+ .34	25.0	400

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Water-quality partial-record stations are particular sites where chemical-quality, biological and/or sediment data are collected systematically over a period of years for use in hydrologic analyses. These data are collected usually less than quarterly. Samples collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin are referred to as miscellaneous sites.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

## CUMBERLAND RIVER BASIN

## 03430430 RAGSDALE SPRING NEAR NOLENSVILLE, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
APR 10...	1225	0.07	495	14.0	260	27	92	7.6	2.2	2	0.1

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, DIS- SOLVED (UG/L AS FE)
APR 10...	0.5	234	23	2.3	7.6	286	280	0.39	0.05	5

## 03430435 OWL CREEK TRIBUTARY NEAR HOLT KNOBS NEAR NOLENSVILLE, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
APR 10...	1255	0.08	498	15.0	250	89	87	7.6	2.5	2	0.1

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, DIS- SOLVED (UG/L AS FE)
APR 10...	1.0	160	25	3.2	6.5	283	230	0.38	0.06	3

## 03430445 OWL CREEK TRIBUTARY AT SUNSET ROAD NEAR NOLENSVILLE, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
APR 10...	1230	0.07	440	19.0	220	17	77	6.1	2.4	2	0.1

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, DIS- SOLVED (UG/L AS FE)
APR 10...	1.9	200	18	5.2	5.9	263	240	0.36	0.05	6



## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

## CUMBERLAND RIVER BASIN--Continued

## 03432850 FARRAR SPRING NEAR CLOVERCROFT, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
APR 10...	1010	0.1	405	14.5	200	8	75	3.3	1.3	1	0
DATE		POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, DIS- SOLVED (UG/L AS FE)

APR 10... 0.3 193 12 1.7 6.9 229 220 0.31 0.06 4

## 03432856 LITTLE HARPETH RIVER BELOW CLOVERCROFT, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
APR 10...	1025	0.47	370	14.0	190	20	70	3.5	1.8	2	0.1
DATE		POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, DIS- SOLVED (UG/L AS FE)

APR 10... 1.0 169 15 3.2 5.6 209 200 0.28 0.27 11

## 03432858 LITTLE HARPETH RIVER TRIBUTARY NEAR CLOVERCROFT, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
APR 10...	1100	0.01	418	12.0	240	8	89	3.7	1.4	1	0
DATE		POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, DIS- SOLVED (UG/L AS FE)

APR 10... 0.5 230 15 2.3 2.5 272 250 0.37 0.01 7

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

## CUMBERLAND RIVER BASIN--Continued

## 03432860 HACKETT SPRING NEAR CLOVERCROFT, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
APR 10...	0855	0.03	380	15.0	200	9	72	3.7	1.4	2	0
DATE		POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, DIS- SOLVED (UG/L AS FE)

APR  
10... 0.4 186 12 6.0 6.0 218 210 0.3 0.02 60

## 03432861 LITTLE HARPETH RIVER AT WILSON PIKE NEAR BRENTWOOD, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
APR 10...	0810	0.71	360	9.5	180	13	68	3.5	1.8	2	0.1
DATE		POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, DIS- SOLVED (UG/L AS FE)

APR  
10... 0.9 171 15 3.6 4.8 211 200 0.29 0.4 6

## 03432872 LITTLE HARPETH RIVER ABOVE BRENTWOOD, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM
APR 10...	1145	0.81	360	16.5	190	17	69	4.0	2.2	2
DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)

APR  
10... 0.1 0.9 172 16 4.7 4.5 223 200 0.3 0.49

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

## CUMBERLAND RIVER BASIN--Continued

## 03432875 LITTLE HARPETH RIVER TRIBUTARY NEAR SLIDERS KNOB NEAR BRENTWOOD, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CAC03)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
APR 10...	1100	0.13	430	15.5	240	15	85	5.8	1.7	2	0
DATE		POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, DIS- SOLVED (UG/L AS FE)
APR 10...		0.9	221	17	4.8	3.9	265	250	0.36	0.09	5

## 03432883 LITTLE HARPETH RIVER AT BRENTWOOD, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CAC03)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
APR 10...	0730	2.5	425	10.5	210	17	78	4.9	2.8	3	0.1
DATE		POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, DIS- SOLVED (UG/L AS FE)
APR 10...		1.2	198	17	5.9	3.8	256	230	0.35	1.7	15

## TENNESSEE RIVER BASIN

## 03566446 CARSON SPRING NEAR OOLTEWAH, TN

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
MAY 20...	1100	305	7.90	17.5	756	6.5	69	38	33	160	35	18	
DATE		SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WH WAT TOTAL FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	
MAY 20...	2.0	3	0.1	0.8	166	4.0	2.9	2.5	8.5	159	170		
DATE		SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)			
MAY 20...		0.22	<0.01	0.25	0.02	0.03	0.19	0.2	0.02	10			

## 260 ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

TENNESSEE RIVER BASIN--Continued

03566940 STANDIFER SPRING NEAR OOLTEWAH, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI KF AGAR (COLS. PER 100 ML)
MAY 20...	1440	0.05	420	7.60	15.5	753	8.9	90	77	350
DATE		HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)
MAY 20...	210	79	3.1	3.9	4	0.1	1.9	218	11	
DATE		SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
MAY 20...	2.8	4.2	12	240	240	0.33	0.03	<0.01	0.92	
DATE		NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)
MAY 20...	0.05	0.05	0.06	0.15	0.2	0.05	0.03	0.06	6	

## OBION RIVER BASIN

07025400 NORTH FORK OBION RIVER NEAR MARTIN, TN (CE)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV 14...	1225	248		60	19.0	22 15
JAN 08...	1400	192		48	4.5	20 10
FEB 19...	1245	492		72	13.0	115 153
MAY 09...	0845	163		50	19.5	-- --
JUN 06...	1925	391		150	21.0	188 198
JUN 19...	1145	157		50	22.5	41 17
JUL 31...	1600	141		50	28.0	136 52
SEP 11...	1715	154		55	23.0	40 17



## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

## WOLF RIVER BASIN

07031660 WOLF RIVER AT WALNUT GROVE ROAD AT MEMPHIS, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
MAY 13...	1400	383	50	24.5	168	174
AUG 22...	1200	229	49	22.0	74	46

## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
CUMBERLAND RIVER BASIN									
03407908 - NEW RIVER AT CORDELL, TN									
NOV 20...	1230	190	--	15.0	JUL 09...	1140	20	--	27.0
APR 14...	1220	178	--	15.0	SEP 05...	1130	207	--	19.0
MAY 21...	0900	51	--	15.0					
03407990 - NEW RIVER NEAR HUNTSVILLE, TN									
JUL 28...	1130	23	310	27.0					
03414500 - EAST FORK OBEY RIVER NEAR JAMESTOWN, TN									
OCT 03...	1505	433	--	14.0	APR 15...	1320	123	--	17.0
NOV 05...	1300	87	--	10.5	JUN 05...	1030	317	--	19.5
DEC 11...	1400	127	--	10.5	JUL 11...	0920	18	--	26.0
JAN 22...	1445	119	--	8.5	AUG 21...	1000	15	--	26.5
MAR 17...	1800	720	--	11.0					
03416000 - WOLF RIVER NEAR BYRDSTOWN, TN									
OCT 03...	1000	42	--	14.0	APR 15...	0850	37	--	17.5
NOV 05...	0900	22	--	10.5	JUN 04...	1330	73	--	19.5
DEC 11...	0955	33	--	10.5	JUL 10...	1615	25	--	26.5
JAN 22...	1000	92	--	8.0	AUG 05...	1255	7.8	--	33.0
MAR 04...	1200	103	--	6.5					
03418070 - ROARING RIVER ABOVE GAINESBORO, TN									
OCT 02...	0905	4.0	--	12.0	JAN 23...	1225	0.87	--	7.5
NOV 06...	0900	7.1	--	12.5	MAR 17...	1315	509	--	10.5
DEC 10...	1545	1.8	--	10.0	APR 14...	1407	2.4	--	17.0
03418935 - BEAVERDAM CREEK AT LANTANA ROAD NEAR BELLVIEW, TN									
OCT 09...	1410	6.8	48	14.0					
03418950 - BEE CREEK NR HERBERT DOMAIN, TN									
OCT 09...	1315	25	32	14.5	AUG 05...	1450	0.07	--	35.0
JUL 08...	1400	2.7	--	27.5	21...	1230	0.03	--	25.5
03420000 - CALFKILLER RIVER BELOW SPARTA, TN									
JUN 26...	1140	53	--	25.0					
03420116 - ROCKY RIVER AT ROCKY RIVER ROAD AT RIVERVIEW, TN									
OCT 09...	1730	24	142	15.5	AUG 22...	0815	1.5	--	24.5
APR 16...	1000	30	--	13.0					
03420470 - NORTH PRONG BARREN FORK AT OAK GROVE, TN									
OCT 08...	1000	15	135	14.5					

## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
CUMBERLAND RIVER BASIN--Continued									
03420720 - HICKORY CREEK NEAR VIOLA, TN									
OCT 08...	1430	12	295	15.0	APR 17...	1325	11	--	12.0
03421000 - COLLINS RIVER NEAR MCMINNVILLE, TN									
OCT 09...	0900	386	--	15.0	MAR 18...	1515	1550	--	12.0
NOV 07...	0950	760	--	10.0	APR 17...	1040	403	--	17.0
DEC 12...	1255	635	--	10.0	JUL 09...	0835	183	--	25.5
JAN 24...	0935	256	--	6.0	AUG 06...	1050	92	--	29.5
03421150 - CHARLES CREEK AT DAYLIGHT, TN									
OCT 08...	1200	3.1	178	14.5	AUG 22...	1000	1.6	--	26.5
APR 23...	1350	3.0	--	12.5					
03422500 - CANEY FORK NEAR ROCK ISLAND, TN									
OCT 04...	1335	3400	--	17.0	SEP 16...	1040	44	--	20.0
JUL 08...	0945	88	--	25.0					
22...	0950	84	--	21.0					
03426800 - EAST FORK STONES RIVER AT WOODBURY, TN									
OCT 08...	1045	15	--	14.0	APR 23...	1020	15	--	14.5
NOV 07...	1230	14	--	11.0	JUN 11...	1015	17	--	21.0
DEC 19...	1115	15	--	7.5	13...	0945	15	--	20.5
FEB 04...	0950	82	--	12.5	JUL 07...	1030	9.1	--	24.5
MAR 12...	1015	24	--	13.5	AUG 14...	1200	4.9	--	27.5
03430420 - OWL CREEK TRIBUTARY NEAR NOLENSVILLE, TN									
APR 10...	1120	0.14	385	16.0					
03430425 - OWL CREEK TRIBUTARY AT OWL CREEK ROAD NEAR NOLENSVILLE, TN									
APR 10...	1150	0.22	390	18.0					
03430440 - OWL CREEK TRIBUTARY BELOW NOLENSVILLE, TN									
APR 10...	1145	0.07	380	17.0					
03431517 - CUMMINGS BRANCH AT LICKTON, TN									
OCT 09...	1330	0.13	--	17.5	APR 23...	0930	0.69	--	9.0
NOV 08...	1200	0.62	--	13.0	MAY 20...	1302	0.43	--	20.5
DEC 16...	1035	1.3	--	9.5	JUN 11...	0950	10	--	16.0
JAN 06...	1330	0.37	--	6.0	JUL 18...	0900	0.1	--	23.0
FEB 06...	1030	9.5	--	11.0	AUG 13...	1040	0.04	--	21.0
MAR 13...	1230	14	--	13.0	SEP 17...	1145	0.04	--	19.0
27...	1319	2.0	--	16.5					

## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
CUMBERLAND RIVER BASIN--Continued									
03431700 - RICHLAND CREEK AT CHARLOTTE AVENUE, AT NASHVILLE, TN									
OCT					MAY				
08...	1230	2.8	--	17.0	21...	1220	7.2	--	16.5
NOV					JUN				
08...	1530	8.4	--	13.5	11...	1145	53	--	21.0
DEC					JUL				
16...	1222	11	--	8.5	18...	1140	1.7	--	28.5
FEB					AUG				
06...	1205	99	--	11.5	14...	1128	2.2	--	26.0
MAR					SEP				
14...	1000	57	--	13.5	17...	1120	3.4	--	22.0
APR									
23...	1230	5.1	--	15.0					
03431800 - SYCAMORE CREEK NEAR ASHLAND CITY, TN									
OCT					APR				
07...	1245	26	--	13.5	22...	0910	62	--	12.0
NOV					MAY				
04...	1615	152	--	12.0	27...	1015	217	--	17.0
DEC					JUL				
11...	1358	75	--	11.0	07...	1115	22	--	25.0
JAN					AUG				
16...	1430	32	--	5.0	21...	1110	16	--	23.0
MAR									
03...	1115	66	--	7.0					
034323284 - MAYES CREEK TRIBUTARY ABOVE CLOVERCROFT, TN									
APR									
10...	0830	0.01	480	13.5					
034323287 - MAYES CREEK TRIBUTARY BELOW CLOVERCROFT, TN									
APR									
10...	0800	0.21	455	10.5					
03432329 - SPRING NO. 16 AT CLOVERCROFT, TN									
APR									
10...	0855	0.06	348	11.0					
03432334 - HARPETH RIVER AT INTERSTATE 65 NEAR FRANKLIN, TN									
MAY					AUG				
13...	1035	9.7	415	20.5	25...	1030	2.6	--	24.0
JUL									
07...	0910	6.4	415	24.5					
03432350 - HARPETH RIVER AT FRANKLIN, TN									
OCT					MAR				
01...	1000	23	--	15.5	03...	0915	100	--	7.0
NOV					APR				
04...	1220	40	--	14.0	14...	0930	57	--	18.0
13...	1245	6.3	--	16.5	MAY				
DEC					27...	0920	24	--	24.0
09...	0923	43	--	8.5	JUL				
JAN					08...	1100	2.8	--	26.5
17...	1110	10	--	6.0	AUG				
23...	1445	12	--	7.0	18...	0915	29	--	23.0
034323925 - HARPETH RIVER (AT MILE 85.39) NEAR FRANKLIN, TN									
JAN									
23...	1220	17	520	6.5					
03432400 - HARPETH RIVER BELOW FRANKLIN, TN									
JAN									
23...	1045	22	590	7.0					
03432426 - HARPETH RIVER AT COTTON ROAD BRIDGE, NEAR FRANKLIN, TN									
JAN									
23...	0930	22	460	6.0					



## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
CUMBERLAND RIVER BASIN--Continued									
03432470 - MURFREES FORK ABOVE BURWOOD, TN									
OCT 17...	1245	0.55	400	20.0	MAY 12...	0940	0.58	340	20.5
APR 24...	1150	1.5	305	17.5	AUG 25...	1200	0.32	--	25.5
03432474 - WEST PRONG MURFREES FORK NEAR BURWOOD, TN									
OCT 22...	0930	0.3	415	17.0	MAY 12...	1028	0.28	342	20.5
APR 24...	1245	0.92	340	16.5					
03432495 - MURFREES FORK ABOVE LEIPERS FORK, TN									
OCT 17...	1030	1.2	420	14.5	MAY 12...	1130	2.1	380	20.0
APR 24...	1350	5.3	340	17.0					
03432868 - SMITH SPRING NEAR CLOVERCROFT, TN									
APR 10...	0830	0.5	400	13.0					
03432873 - KENNON SPRING AT BRENTWOOD, TN									
APR 10...	1000	0.06	470	13.5					
03432925 - LITTLE HARPETH RIVER AT GRANNY WHITE PIKE AT BRENTWOOD, TN									
APR 14...	0800	5.6	440	16.0	JUL 10...	0835	1.8	570	23.0
MAY 13...	0830	1.7	480	18.5	AUG 25...	0900	3.1	640	19.5
03433500 - HARPETH RIVER AT BELLEVUE, TN									
OCT 08...	0915	32	--	14.0	APR 18...	0829	118	--	12.0
NOV 04...	1045	175	--	13.5	JUN 04...	1030	426	--	21.5
DEC 17...	1140	167	--	9.0	JUL 10...	0940	23	--	23.0
JAN 16...	1210	52	--	3.5	AUG 22...	1245	29	--	26.5
MAR 10...	0900	159	--	11.5					
03433660 - SOUTH HARPETH RIVER AT FERNVALE, TN									
APR 17...	1515	18	240	14.0	JUN 30...	1200	13	255	25.5
MAY 14...	1325	12	240	23.0	AUG 22...	1045	10	280	23.0
03433902 - BIG TURNBULL CREEK NEAR LIBERTY HILL, TN									
APR 17...	1405	7.2	195	14.0	JUN 30...	1316	4.1	255	25.5
MAY 14...	1210	4.7	230	22.5	AUG 22...	0915	3.2	265	22.0
03434500 - HARPETH RIVER NEAR KINGSTON SPRINGS, TN									
OCT 29...	1100	104	--	17.0	MAY 14...	0925	110	--	22.0
NOV 26...	1020	196	--	15.0	30...	1115	1540	--	21.0
DEC 27...	0930	213	--	0.0	JUL 23...	1230	56	--	25.5
JAN 29...	1230	148	--	1.5	30...	1330	70	--	29.0
FEB 25...	1145	883	--	12.5	AUG 07...	1045	73	--	24.5
MAR 27...	0800	592	--	14.0	14...	0850	107	--	24.0
					SEP 05...	1234	4570	--	21.0
					26...	0900	108	--	23.5

## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
CUMBERLAND RIVER BASIN--Continued									
03434620 - TOWN BRANCH NEAR CHARLOTTE, TN									
MAY 15...	1330	0.84	340	19.0	AUG 26...	1405	0.11	340	26.0
03435000 - CUMBERLAND RIVER BELOW CHEATHAM DAM, TN									
NOV 06...	1500	5650	--	16.0	JUN 04...	1045	1750	--	19.0
034351113 - HONEY RUN CREEK BELOW CROSS PLAINS, TN									
OCT 11...	1230	2.7	408	19.0	MAY 13...	1345	3.9	405	21.0
APR 14...	1230	7.4	340	19.0	AUG 25...	0830	1.3	410	22.0
03435320 - RED RIVER AT ADAMS, TN									
AUG 25...	1540	82	420	26.0					
03435770 - SULPHUR FORK RED RIVER ABOVE SPRINGFIELD, TN									
OCT 03...	1130	18	--	13.5	APR 14...	1100	23	--	16.0
NOV 05...	1554	57	--	11.0	JUN 03...	1120	146	--	17.0
25...	1442	34	--	13.5	JUL 08...	1420	16	--	25.0
DEC 09...	1314	42	--	9.0	AUG 25...	1140	4.5	--	23.0
JAN 24...	1330	19	--	6.0					
MAR 04...	1525	43	--	8.0					
03436000 - SULPHUR FORK RED RIVER NEAR ADAMS, TN									
OCT 03...	0900	74	--	13.5	APR 15...	1315	70	--	17.0
NOV 07...	0933	151	--	12.0	MAY 28...	1250	257	--	19.0
DEC 09...	1500	134	--	9.0	JUL 09...	1400	45	--	27.0
JAN 24...	1000	66	--	4.5	AUG 25...	1340	19	--	24.0
MAR 04...	1130	130	--	9.0					
03436100 - RED RIVER AT PORT ROYAL, TN									
OCT 09...	1200	177	--	14.5	APR 28...	0940	325	--	14.0
NOV 08...	1146	1190	--	12.0	MAY 28...	1030	1550	--	16.0
DEC 10...	1245	897	--	10.5	JUL 09...	1130	345	--	25.0
JAN 23...	1500	379	--	6.0	AUG 26...	0920	134	--	24.0
MAR 05...	1210	890	--	9.0					
03436690 - YELLOW CREEK AT ELLIS MILLS, TN									
OCT 04...	1110	38	--	16.0	APR 25...	0930	66	--	16.0
NOV 05...	1033	158	--	13.0	MAY 28...	1630	46	--	20.0
05...	1215	150	--	14.5	JUL 10...	1015	30	--	24.0
DEC 14...	1150	120	--	7.0	AUG 26...	1235	21	--	25.0
JAN 15...	1230	41	--	7.5					
MAR 05...	1710	94	--	11.0					
034369845 - DYERS CREEK TRIBUTARY NEAR HEFLIN CEMETERY NEAR DOVER, TN									
MAR 26...	1255	0.04	150	16.0					

## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
CUMBERLAND RIVER BASIN--Continued									
034369846 - DYERS CREEK TRIBUTARY NEAR NELUMS CEMETERY NEAR DOVER, TN									
MAR 26...	1020	0.46	127	13.5					
034369848 - DYERS CREEK TRIBUTARY NEAR DOVER, TN									
MAR 26...	0855	0.35	335	12.5					
03437140 - MELTON SPRING NEAR BUMPUS MILLS, TN									
MAR 26...	1535	1.0	240	13.0					
03437141 - HAYES FORK CREEK NEAR BIG ROCK, TN									
MAR 26...	1505	0.74	210	15.0					
03437143 - HAYES FORK CREEK TRIBUTARY NEAR BUMPUS MILLS, TN									
MAR 26...	1355	0.63	130	16.0					
03437145 - HAYES FORK CREEK NEAR BUMPUS MILLS, TN									
MAR 26...	1430	3.2	145	15.0					
TENNESSEE RIVER BASIN									
03455000 - FRENCH BROAD RIVER NEAR NEWPORT, TN									
OCT 02...	0825	826	--	17.0	FEB 26...	1450	1830	--	
NOV 15...	1310	1660	--	20.0	JUN 03...	0910	1520	--	24.0
DEC 16...	1345	1370	--	5.0	AUG 05...	1400	529	--	25.0
03455050 - CLEAR CREEK AT PARROTSVILLE, TN									
JAN 15...	1545	2.1	500	6.0	MAR 25...	1330	5.8	475	15.0
JUL 30...	0835	1.4	490	21.0					
034611996 - CRYING CREEK ABOVE COSBY, TN									
JAN 16...	1230	2.1	17	3.0	JUL 31...	1055	0.91	23	18.0
MAR 26...	0925	4.7	16	8.0					
03461200 - COSBY CREEK ABOVE COSBY TN									
OCT 01...	1015	4.3	--	14.0	MAY 15...	1115	7.3	--	14.0
NOV 12...	1050	17	--	10.5	JUN 02...	1625	9.9	--	16.0
DEC 18...	0945	16	--	4.0	JUL 01...	1000	5.3	--	17.5
JAN 22...	1355	10	--	5.5	AUG 06...	1355	4.5	--	19.0
FEB 26...	0955	22	--	3.0	SEP 04...	1010	64	--	15.0
APR 02...	0930	14	--	10.0					
09...	1235	12	--	9.0					
03461450 - ENGLISH CREEK NEAR NEWPORT, TN									
MAR 26...	0845	7.3	350	10.0	JAN 16...	1200	2.3	350	6.0
JUL 31...	1210	1.7	395	20.0					

## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
TENNESSEE RIVER BASIN--Continued									
03465500 - NOLICHUCKY RIVER AT EMBREEVILLE, TN									
OCT 02...	0855	364	--	16.0	JUN 04...	1055	523	--	20.5
JAN 23...	1400	840	--	3.5	JUL 01...	1045	304	--	25.0
APR 03...	0935	797	--	14.0	14...	1230	387	--	26.0
MAY 09...	0940	518	--	17.5	AUG 06...	1115	203	--	24.5
03465603 - LITTLE CHEROKEE CREEK AT GARBER, TN									
JAN 15...	1205	3.0	360	3.5	JUL 31...	1050	1.5	370	19.0
MAR 25...	1105	7.1	355	11.0					
03465620 - CLARK CREEK AT GRAHAM MILL, TN									
JAN 15...	1115	3.2	40	2.5	JUL 31...	1135	0.49	85	21.5
MAR 25...	1015	9.8	38	9.0					
03465780 - CLEAR FORK NEAR FAIRVIEW, TN									
JAN 15...	1150	1.9	470	3.5	JUL 30...	1050	1.6	495	22.0
MAR 25...	0940	6.2	475	10.0					
03465800 - MUDDY FORK AT FAIRVIEW, TN									
JAN 15...	1055	1.9	480	2.0	JUL 30...	1010	1.6	510	21.5
MAR 25...	0900	6.6	490	9.5					
03466228 - SINKING CREEK AT AFTON, TN									
OCT 01...	1400	3.3	--	15.5	APR 01...	1100	9.0	--	15.0
NOV 12...	1445	3.0	--	12.0	MAY 16...	1035	4.9	--	17.0
DEC 16...	1105	5.7	--	5.5	JUN 30...	1415	3.8	--	21.5
JAN 22...	1015	4.4	--	5.0	AUG 05...	1015	2.3	--	19.5
FEB 25...	1320	17	--	8.0	SEP 02...	1410	3.5	--	17.5
03466256 - COLLEGE CREEK AT TUSCULUM, TN									
JAN 15...	1315	1.6	450	8.5	JUL 30...	1320	1.1	420	22.0
MAR 25...	1045	3.4	460	13.0					
03466295 - CAMP CREEK AT CAMP CREEK, TN									
JAN 15...	1430	13	165	11.5	JUL 30...	1430	6.0	165	18.5
MAR 25...	1205	27	132	14.0					
03467993 - CEDAR CREEK NEAR VALLEY HOME, TN									
JAN 16...	1525	0.43	--	7.0	JUL 31...	0840	0.44	430	22.0
MAR 26...	1405	1.7	380	14.0					
03467998 - SINKING FORK AT WHITE PINE, TN									
JAN 16...	1430	1.2	--	6.5	JUL 31...	1015	1.1	455	20.0
MAR 26...	1310	4.0	470	14.5					



## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
TENNESSEE RIVER BASIN--Continued									
03469610 - COVE CREEK AT HATCHERTOWN, TN									
JAN 16...	1050	3.8	225	6.5	JUL 31...	0930	2.2	240	17.5
MAR 26...	1120	8.6	210	14.0					
03476515 - BEIDLEMAN CREEK NEAR CAYWOOD FORD, TN									
JAN 16...	0905	13	380	2.0	JUL 30...	1415	8.6	340	23.0
MAR 26...	0800	32	350	10.0					
03481600 - CORN CREEK AT MOUNTAIN CITY, TN									
JAN 15...	1500	1.6	37	0.5	JUL 31...	0750	0.5	81	16.5
MAR 25...	1435	4.1	48	15.5					
03486313 - SINKING CREEK AT JOHNSON CITY, TN									
JAN 15...	1315	4.7	320	10.5	JUL 31...	0940	4.6	335	16.0
MAR 25...	1225	10	280	15.0					
03487509 - BEAR CREEK AT SULLIVAN GARDENS, TN									
JAN 16...	1200	0.29	575	1.5	MAR 26...	1050	1.2	400	21.0
03487550 - REEDY CREEK AT OREBANK, TN									
OCT 02...	1615	10	--	15.5	MAY 08...	0800	12	--	18.5
NOV 14...	0900	12	--	14.0	JUN 05...	0925	30	--	18.0
DEC 18...	1340	28	--	3.5	30...	1345	12	--	22.5
JAN 24...	1130	22	--	1.5	AUG 05...	1445	5.5	--	24.5
FEB 27...	0940	110	--	7.5	SEP 03...	1815	20	--	20.0
APR 03...	1445	26	--	17.0					
03490500 - HOLSTON RIVER AT SURGOINSVILLE, TN									
NOV 14...	1030	2530	--	13.5	MAY 06...	1240	1080	--	21.0
DEC 19...	1155	2420	--	4.0	JUN 03...	1305	1790	--	24.5
JAN 22...	1300	1790	--	4.5	AUG 05...	1200	1550	--	27.0
APR 04...	1045	1340	--	19.5					
03490530 - FORGEY CREEK NEAR SURGOINSVILLE, TN									
JAN 16...	1245	0.91	--	3.5	JUL 30...	1130	0.78	410	24.0
MAR 26...	1115	2.8	410	--					
03491000 - BIG CREEK NEAR ROGERSVILLE, TN									
OCT 01...	1130	2.6	--	15.5	APR 02...	1050	22	--	14.0
NOV 13...	0900	4.7	--	11.5	MAY 06...	1520	8.3	--	23.5
DEC 17...	0900	17	--	5.0	JUN 03...	1405	13	--	23.0
JAN 22...	1520	12	--	3.5	JUL 02...	1040	4.9	--	26.0
FEB 25...	1205	109	--	7.0					

## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
TENNESSEE RIVER BASIN--Continued									
03491300 - BEECH CREEK AT KEPLER, TN									
OCT 01...	1355	2.2	--	16.0	MAY 07...	0950	6.8	--	18.5
NOV 13...	1100	7.8	--	12.0	JUN 03...	1545	21	--	22.5
DEC 17...	1230	18	--	3.5	JUL 02...	1230	3.7	--	23.0
JAN 23...	0905	12	--	9.5	AUG 05...	0755	0.83	--	22.0
FEB 25...	1335	77	--	6.5	05...	0900	0.89	--	22.0
APR 02...	1300	21	--	17.0					
03494990 - FLAT CREEK AT LUTTRELL, TN									
JAN 15...	1545	3.3	--	1.0	JUL 31...	1315	3.8	--	21.0
MAR 25...	1400	18	350	14.0					
03495400 - ROSEBERRY CREEK AT SHIPETOWN, TN									
JAN 16...	1415	2.8	360	4.5	JUL 31...	0925	1.1	390	22.0
MAR 26...	1335	10	330	15.0					
03495550 - LOVE CREEK AT KNOXVILLE, TN									
JAN 16...	1505	3.3	515	6.0	JUL 31...	1030	2.2	480	19.0
MAR 25...	0800	7.4	420	11.0					
03498500 - LITTLE RIVER NEAR MARYVILLE, TN									
OCT 02...	1540	131	--	16.0	APR 03...	0940	224	--	15.0
NOV 13...	1420	263	--	13.0	09...	0955	322	--	14.0
DEC 17...	1110	295	--	4.0	MAY 14...	0955	140	--	19.0
JAN 24...	0905	180	--	4.5	JUN 02...	0910	192	--	20.0
FEB 27...	0930	468	--	6.5	11...	1017	377	--	22.0
					JUL 02...	0915	121	--	24.5
					AUG 01...	0850	60	--	24.5
03527800 - BIG WAR CREEK AT LUTHER, TN									
JAN 16...	1040	4.7	--	-1.0	JUL 30...	1000	1.6	282	22.0
MAR 26...	0850	14	315	9.0					
03528000 - CLINCH RIVER ABOVE TAZEWELL, TN									
NOV 12...	1230	650	--	12.0	APR 01...	1145	1020	--	16.5
DEC 16...	1330	1480	--	5.0	MAY 06...	1530	407	--	22.0
JAN 21...	1200	675	--	1.0	JUL 03...	1205	403	--	25.0
03528385 - FALL CREEK AT LICKSKILLET, TN									
JAN 15...	1155	1.1	--	1.0	JUL 30...	1215	0.69	405	22.0
MAR 25...	1100	2.8	345	11.0					
03528390 - CROOKED CREEK NEAR MAYNARDVILLE, TN									
JAN 15...	1055	0.37	--	1.0	JUL 30...	0950	0.21	385	20.5
MAR 25...	1005	1.7	290	9.5					

## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
TENNESSEE RIVER BASIN--Continued									
03534927 - BULLRUN CREEK NEAR LUTTRELL, TN									
JAN 15...	1450	2.2	--	1.0	JUL 31...	1510	1.3	220	26.0
MAR 25...	1305	8.4	280	14.0					
03534975 - NORTH FORK BULLRUN CREEK BELOW MAYNARDVILLE, TN									
JAN 15...	1325	1.4	--	3.5	JUL 30...	1340	1.6	425	26.0
MAR 25...	0845	6.7	360	8.0					
03534990 - RACCOON CREEK AT PAULETTE, TN									
JAN 15...	0950	1.8	--	0.5	JUL 30...	0805	0.58	395	20.0
MAR 25...	0745	4.9	355	8.0					
03535000 - BULLRUN CREEK NEAR HALLS CROSSROADS, TN									
NOV 21...	1010	13	--	14.0	JUN 03...	1120	34	--	20.5
DEC 24...	1130	21	--	2.0	JUL 08...	0910	7.6	--	24.0
MAR 03...	1100	53	--	5.0	AUG 01...	1120	8.5	--	21.0
MAY 15...	1040	13	--	20.5	SEP 05...	1005	17	--	20.0
03536550 - WHITE OAK CREEK BELOW MELTON VALLEY DRIVE NEAR OAK RIDGE, TN									
NOV 21...	1030	5.9	--	17.5	JUL 15...	1030	6.5	--	24.0
21...	1100	5.8	--	17.0					
03537100 - MELTON BRANCH NEAR MELTON HILL NEAR OAK RIDGE, TN									
MAR 19...	0910	11	--	13.0	MAY 15...	1240	0.02	--	19.0
20...	1110	2.1	--	10.5					
03538225 - POPLAR CREEK NEAR OAK RIDGE, TN									
NOV 12...	1205	28	--	13.0	MAY 20...	0940	21	--	18.0
DEC 16...	1140	111	--	3.0	JUN 24...	1040	11	--	24.0
JAN 26...	1210	57	--	4.0	SEP 09...	1040	9.2	--	18.0
FEB 25...	1155	159	--	7.0					
03538250 - EAST FORK POPLAR CREEK NEAR OAK RIDGE, TN									
NOV 12...	1440	22	--	16.0	FEB 25...	1430	55	--	11.0
DEC 16...	1420	34	--	4.0	MAY 20...	1300	19	--	19.0
JAN 21...	1445	27	--	7.0					
03538270 - BEAR CREEK AT STATE HIGHWAY 95 NEAR OAK RIDGE, TN									
MAY 15...	1015	0.9	--	15.0	JUL 15...	1230	2.0	--	18.5
03539800 - OBED RIVER NEAR LANCING, TN									
OCT 08...	1330	425	--	13.0	APR 09...	0940	460	--	5.5
DEC 23...	1030	483	--	0.5	MAY 14...	1030	126	--	20.5
MAR 04...	1330	730	--	4.0	JUN 02...	1130	1080	--	18.5

## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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TENNESSEE RIVER BASIN--Continued									
03540500 - EMORY RIVER AT OAKDALE, TN									
OCT 31...	1205	320	--	15.0	MAY 28...	1305	7810	--	17.0
MAR 27...	1210	706	--	12.0	JUN 24...	1115	55	--	23.0
APR 28...	1000	312	--	19.0	AUG 28...	1300	65	--	26.0
03543500 - SEWEE CREEK NEAR DECATUR, TN									
NOV 13...	1235	28	--	15.0	APR 01...	1215	76	--	15.5
DEC 18...	1130	62	--	4.5	30...	1030	36	--	16.5
JAN 14...	1215	33	--	3.5	JUN 13...	1240	28	--	22.0
FEB 28...	1135	116	--	9.0	JUL 02...	0900	18	--	24.0
					SEP 19...	1025	19	--	20.0
03555882 - BARNEY CREEK NEAR COKER CREEK, TN									
JAN 15...	1130	2.1	40	3.0	JUL 30...	1355	0.2	60	21.5
MAR 25...	1435	4.3	30	13.5					
03556610 - JUNEBUG CREEK AT RELIANCE, TN									
JAN 15...	1440	0.69	40	5.0	JUL 30...	1210	0.31	50	23.0
MAR 25...	1255	1.1	33	13.0					
03560500 - DAVIS MILL CREEK AT COPPERHILL, TN									
APR 15...	1145	114	--	24.0	AUG 04...	1435	101	--	26.5
JUN 23...	1320	108	--	24.0	SEP 02...	1245	114	--	25.0
JUL 01...	1115	106	--	25.0					
08...	1205	97	--	22.0					
17...	1215	98	--	18.0					
03563000 - OCOEE RIVER AT EMF, TN									
NOV 12...	1400	1030	--	16.0	JUN 04...	1430	1050	--	20.5
FEB 26...	1400	1100	--	9.0	SEP 02...	1530	1430	--	19.0
03564500 - OCOEE RIVER AT PARKSVILLE, TN									
MAR 11...	1130	1200	--	9.0	JUN 03...	0910	109	--	20.5
MAY 07...	1100	98	--	16.5					
03565300 - SOUTH CHESTUEE CREEK NEAR BENTON, TN									
OCT 09...	1140	3.6	--	13.5	FEB 27...	0915	18	--	9.0
16...	1200	3.5	--	18.5	APR 02...	1430	12	--	16.5
22...	1130	6.2	--	18.5	MAY 06...	1500	5.1	--	18.0
30...	1110	4.3	--	15.5	JUN 03...	1415	5.7	--	21.5
NOV 06...	1120	5.4	--	10.5	30...	1210	2.7	--	23.5
25...	1340	5.3	--	12.5	AUG 05...	1215	1.8	--	22.0
DEC 09...	1310	8.0	--	6.5	SEP 03...	1130	11	--	20.0
27...	1130	7.0	--	0.0					
JAN 03...	1150	11	--	4.5					
16...	1200	6.1	--	2.5					



## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
TENNESSEE RIVER BASIN--Continued									
03565500 - OOSTANAULA CREEK NEAR SANFORD, TN									
OCT					MAY				
02...	1440	44	--	15.0	06...	1200	24	--	17.5
09...	1430	21	--	16.0	JUN				
22...	1400	22	--	19.0	03...	1140	23	--	21.0
NOV					JUL				
06...	1330	20	--	12.0	02...	1130	17	--	23.0
25...	1130	22	--	12.5	AUG				
JAN					05...	0925	13	--	21.0
16...	1410	19	--	5.0	SEP				
FEB					03...	1325	45	--	20.0
27...	1345	51	--	9.0					
03566111 - LITTLE SOUTH MOUSE CREEK NEAR CHARLESTON, TN									
JAN					JUL				
15...	1605	1.2	310	10.5	30...	1030	0.49	340	22.0
MAR									
25...	1125	2.5	300	15.0					
03566200 - BRYMER CREEK NEAR MCDONALD, TN									
APR									
15...	0820	2.7	410	15.5					
0356625 - GREASY CREEK AT HOPEWELL, TN									
JAN					JUL				
16...	0940	0.23	270	2.0	30...	0945	0.02	435	20.0
MAR									
25...	1015	0.99	190	10.0					
03566420 - WOLFTEVER CREEK NEAR OOLTEWAH, TN									
OCT					APR				
03...	0930	13	--	15.5	15...	1005	6.7	--	16.0
NOV					MAY				
05...	1500	11	--	10.0	21...	1225	4.6	--	16.0
DEC					JUL				
10...	1335	9.3	--	9.0	09...	0815	1.8	--	23.5
JAN					31...	1330	1.1	--	25.0
23...	1000	6.9	--	5.0					
MAR									
04...	1055	12	--	9.0					
03566939 - MACKEY BRANCH NEAR OOLTEWAH, TN									
MAY									
20...	1415	0.01	280	18.0					
03567500 - SOUTH CHICKAMAUGA CREEK NEAR CHICKAMAUGA, TN									
OCT					APR				
03...	1215	422	--	16.0	15...	1220	194	--	18.0
NOV					MAY				
06...	1000	256	--	10.0	21...	0945	148	--	15.0
DEC					JUL				
10...	1125	209	--	8.5	08...	1515	82	--	27.5
JAN					31...	1145	71	--	26.0
23...	1200	174	--	8.0					
MAR									
04...	1405	293	--	9.0					
03571000 - SEQUATCHIE RIVER NEAR WHITWELL, TN									
OCT					MAR				
01...	1320	115	--	17.0	03...	1355	509	--	9.5
NOV					APR				
04...	1800	188	--	13.0	14...	1220	244	--	16.0
DEC					MAY				
09...	1620	333	--	9.0	21...	1345	100	--	19.5
JAN					JUL				
21...	1450	173	--	7.0	02...	1020	75	--	24.0
FEB					AUG				
19...	1410	4710	--	12.0	01...	1110	46	--	25.0
20...	0900	3180	--	12.0	SEP				
20...	1410	2940	--	12.0	02...	1200	56	--	20.5
21...	1245	1830	--	11.5					

## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
TENNESSEE RIVER BASIN--Continued									
03578000 - ELK RIVER NEAR PELHAM, TN									
OCT 04...	0845	131	--	14.0	APR 16...	0945	45	--	12.0
NOV 06...	1445	116	--	10.0	MAY 29...	1325	303	--	21.0
18...	1213	132	--	14.0	JUL 09...	1005	7.8	--	22.5
DEC 11...	1600	60	--	11.0	AUG 19...	0925	3.2	--	23.0
JAN 16...	1340	31	--	7.0					
MAR 06...	0825	58	--	9.5					
03582205 - NORRIS CREEK BELOW HOWELL, TN									
APR 14...	1540	3.2	320	19.0	JUL 03...	1212	2.6	390	22.0
MAY 13...	1410	1.5	310	21.5	AUG 19...	1320	1.0	390	24.0
03584500 - ELK RIVER NEAR PROSPECT, TN									
OCT 02...	1010	1100	--	11.0	MAY 28...	1045	5340	--	20.5
NOV 05...	1010	1670	--	9.0	JUL 03...	0810	1450	--	22.0
DEC 10...	0940	2410	--	11.5	AUG 19...	0840	417	--	22.5
MAR 04...	0945	1240	--	6.0					
03588000 - SHOAL CREEK AT LAWRENCEBURG, TN									
OCT 04...	1730	32	--	15.5	APR 15...	1345	37	--	17.0
NOV 07...	0850	36	--	12.0	MAY 29...	1600	102	--	20.0
DEC 12...	1220	35	--	11.5	JUL 01...	1335	32	--	22.5
JAN 23...	1200	23	--	7.0	AUG 21...	0845	17	--	20.5
MAR 04...	1430	38	--	8.5					
03588400 - CHISHOLM CREEK AT WESTPOINT, TN									
OCT 04...	1315	24	--	17.0	APR 16...	0825	24	--	12.0
NOV 06...	1345	42	--	12.0	MAY 29...	0925	434	--	22.0
DEC 11...	1230	33	--	12.5	JUL 02...	0940	19	--	22.0
12...	0900	37	--	16.5	AUG 20...	0818	14	--	22.0
JAN 22...	0915	23	--	7.0					
MAR 05...	1125	31	--	7.0					
03588500 - SHOAL CREEK AT IRON CITY, TN									
OCT 03...	0930	192	--	16.0	APR 16...	1045	203	--	13.5
DEC 11...	0900	261	--	11.5	JUL 02...	1200	178	--	23.0
JAN 22...	1200	178	--	7.5	AUG 05...	1155	85	--	24.0
23...	0945	182	--	6.0	SEP 03...	1245	121	--	23.0
MAR 05...	1000	264	--	7.0					
03596000 - DUCK RIVER BELOW MANCHESTER, TN									
OCT 04...	1220	32	--	16.0	APR 16...	1400	52	--	15.0
NOV 07...	0940	27	--	11.0	MAY 29...	1625	741	--	20.5
DEC 12...	0825	52	--	9.0	JUL 09...	1315	39	--	27.0
JAN 16...	1135	33	--	3.0	AUG 19...	1240	24	--	24.5
MAR 06...	1200	71	--	9.0					

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
TENNESSEE RIVER BASIN--Continued									
03596780 - GARRISON FORK ABOVE FAIRFIELD, TN									
JUL 24...	1000	0.62	280	27.0					
03596980 - NOAH FORK NEAR FAIRFIELD, TN									
JUL 24...	1130	3.1	290	27.5					
03597170 - GARRISON FORK NEAR WARTRACE, TN									
JUL 24...	1330	3.0	300	28.0					
03597220 - GARRISON FORK AT L AND N RAILROAD, AT WARTRACE, TN									
JUL 24...	1200	3.3	630	28.0					
03598000 - DUCK RIVER NEAR SHELBYVILLE, TN									
OCT 01...	1320	164	--	16.5	APR 14...	1230	159	--	17.0
NOV 04...	1540	247	--	15.0	MAY 27...	1200	376	--	19.5
DEC 09...	1300	252	--	9.0	JUL 07...	1130	181	--	25.0
JAN 21...	0912	185	--	6.5	AUG 19...	1150	188	--	23.0
MAR 03...	1230	191	--	8.0					
03599960 - AENON CREEK NEAR SPRING HILL, TN									
OCT 18...	0930	0.49	482	17.5	MAY 12...	1030	0.95	385	20.0
APR 29...	1000	1.7	400	15.0	JUN 26...	1030	2.1	435	22.0
03599965 - RUTHERFORD CREEK NEAR SPRING HILL, TN									
OCT 18...	1130	1.5	480	20.0	MAY 12...	1115	3.0	400	20.0
APR 29...	1050	5.5	420	15.0	JUN 26...	0840	4.2	400	21.0
03599980 - RUTHERFORD CREEK NEAR NEAPOLIS, TN									
OCT 18...	1300	2.9	460	21.5	MAY 12...	1220	4.9	400	22.0
APR 29...	1145	9.2	390	19.0	JUN 26...	1105	7.1	390	25.0
003599970 - MCCUTCHEON CREEK NEAR SPRING HILL, TN									
OCT 17...	1400	0.43	440	19.0	MAY 12...	0955	0.86	430	18.0
APR 29...	0900	1.3	385	14.0	JUN 26...	1000	1.1	410	21.0
03600085 - CARTERS CREEK AT PETTY LANE NEAR CARTERS CREEK, TN									
OCT 22...	1200	0.81	420	17.0	JUN 26...	1230	1.6	390	22.0
MAY 12...	1415	1.3	360	22.0					
03600086 - CARTERS CREEK TRIBUTARY NEAR CARTERS CREEK, TN									
OCT 22...	1100	0.16	460	16.5	JUN 26...	1140	0.33	360	21.0
MAY 12...	1300	0.68	340	20.5					
03600088 - CARTERS CREEK AT BUTLER ROAD AT CARTERS CREEK, TN									
OCT 18...	1430	1.0	423	23.0	JUN 26...	1100	1.8	380	23.5
MAY 12...	1245	1.5	320	22.5	AUG 25...	1245	0.55	--	26.0

## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
TENNESSEE RIVER BASIN--Continued									
03600093 - CARTERS CREEK NEAR DARKS MILL, TN									
OCT 22...	1400	1.6	470	18.0	MAY 13...	1015	2.8	340	21.0
03600360 - SNOW CREEK NEAR SANTA FE, TN									
OCT 23...	0830	2.1	350	17.5	MAY 12...	1330	2.6	290	22.0
APR 29...	1330	3.4	290	17.5					
03600370 - SNOW CREEK NEAR WILLIAMSPORT, TN									
APR 29...	1035	6.1	330	16.0	MAY 12...	1430	3.8	350	20.0
03600380 - LEIPERS CREEK AT WILLIAMSPORT, TN									
APR 29...	0935	11	280	17.0	MAY 12...	1515	9.0	360	21.0
03600500 - BIG BIGBY CREEK AT SANDY HOOK, TN									
OCT 02...	1447	8.2	--	19.0	APR 17...	0915	6.5	--	10.5
NOV 05...	1430	11	--	16.5	MAY 28...	1710	479	--	21.0
DEC 10...	1405	8.0	--	14.5	JUL 01...	0915	4.1	--	24.0
12...	1100	8.0	--	10.5	AUG 19...	1315	3.3	--	27.0
JAN 23...	1257	5.8	--	9.0					
MAR 06...	1400	7.0	--	14.5					
03601100 - BIG BIGBY CREEK AT NEEDMORE, TN									
OCT 03...	1300	15	265	25.0	JUL 01...	1110	8.8	700	24.0
APR 15...	1200	18	305	18.0	AUG 19...	1255	7.7	650	24.5
MAY 13...	1135	12	320	20.5					
03602192 - WEST PINEY RIVER NEAR DICKSON, TN									
OCT 10...	0826	9.1	266	16.0	AUG 22...	1355	8.4	285	21.0
MAY 14...	1135	14	230	18.0					
03602194 - WEST PINEY RIVER BELOW STATE HIGHWAY 48, NEAR DICKSON, TN									
OCT 10...	0930	11	235	16.0	AUG 22...	1230	8.3	250	21.0
MAY 15...	0900	14	235	17.0					
03602209 - PINEY RIVER NEAR OAK GROVE, TN									
OCT 10...	1040	15	260	16.0	AUG 22...	1300	12	260	22.0
MAY 15...	0940	19	240	17.0					
03602230 - PINEY RIVER ABOVE PINWOOD, TN									
OCT 10...	1210	24	289	16.0	MAY 14...	1255	38	260	20.0
03602265 - PINEY RIVER AT PINWOOD, TN									
OCT 10...	1310	57	263	17.0	MAY 15...	1130	80	250	19.0



## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
TENNESSEE RIVER BASIN--Continued									
03602500 - PINEY RIVER AT VERNON, TN									
OCT 08...	1000	93	--	13.5	APR 23...	1420	161	--	14.0
NOV 04...	1222	172	--	14.0	MAY 30...	0940	127	--	19.0
DEC 09...	1600	171	--	10.0	JUL 01...	1215	103	--	28.0
JAN 21...	1130	106	--	8.5	AUG 04...	1250	71	--	23.0
MAR 07...	1110	157	--	10.0	SEP 02...	1100	72	--	19.0
03603000 - DUCK RIVER ABOVE HURRICANE MILLS, TN									
OCT 01...	1400	1410	--	18.0	APR 24...	1630	1070	--	13.0
NOV 04...	1500	2240	--	14.0	MAY 29...	1530	3960	--	20.0
DEC 08...	1600	1530	--	13.0	JUL 03...	1325	750	--	23.0
JAN 10...	1400	1700	--	10.0	AUG 22...	1100	640	--	24.0
MAR 22...	0740	988	--	8.0					
MAR 11...	1800	1220	--	12.0					
03604500 - BUFFALO RIVER NEAR LOBELVILLE, TN									
OCT 29...	1221	516	--	18.0	JUN 25...	1100	343	--	23.0
NOV 26...	1322	576	--	15.5	JUL 29...	1130	272	--	25.5
FEB 25...	1100	1110	--	6.5	SEP 02...	1730	269	--	20.0
MAR 27...	1350	868	--	13.0	SEP 26...	1245	343	--	22.0
APR 23...	1815	456	--	13.0					
03605555 - TRACE CREEK ABOVE DENVER, TN									
OCT 02...	1300	18	--	16.0	APR 24...	0845	19	--	14.0
NOV 05...	1400	39	--	14.5	MAY 29...	0845	16	--	20.0
DEC 11...	1530	36	--	12.0	JUL 02...	1110	12	--	24.0
JAN 22...	1400	21	--	10.0	AUG 05...	1200	6.2	--	22.0
MAR 06...	0955	22	--	9.0	SEP 03...	0725	6.8	--	20.0
03606500 - BIG SANDY RIVER AT BRUCETON, TN									
OCT 02...	1030	186	--	13.0	APR 24...	1230	102	--	13.0
NOV 05...	0945	141	--	9.5	MAY 29...	1125	138	--	19.0
DEC 11...	1330	214	--	8.0	JUL 02...	1545	60	--	23.0
JAN 23...	0930	118	--	6.0	AUG 05...	0900	46	--	19.0
MAR 06...	1430	128	--	10.0	SEP 03...	1200	51	--	20.0

## GROUND-WATER LEVELS

## CARTER COUNTY

361738082132900. Local number, Ct:H-1.

LOCATION.--Lat 36°17'38", long 82°13'29", Hydrologic Unit 06010103, 3.5 mi south of Elizabethton, 0.8 mi north of Gap Creek.

Owner: Gap Creek community.

AQUIFER.--Honaker dolomite of middle Cambrian age.

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 24 in., depth 31 ft, casing information not available.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 1,820 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of concrete tile, 2.50 ft above land-surface datum.

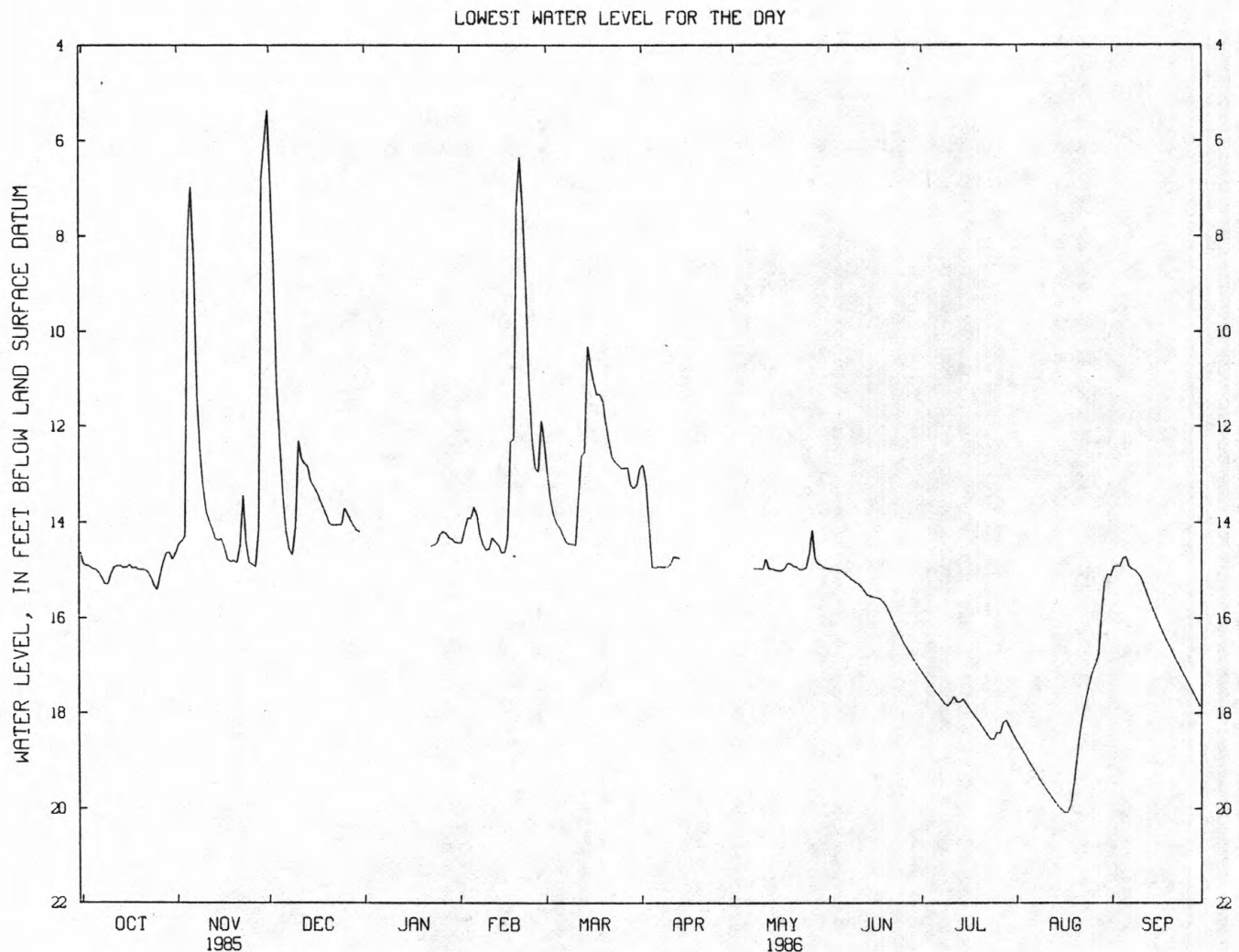
REMARKS.--Highest water level readings may be influenced for short periods by surface inflow. No record January 1-22, April 15 to May 7.

PERIOD OF RECORD.--April 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.50 ft below land-surface datum, July 30, 1985; lowest, 26.01 ft below land-surface datum Dec. 22, 23, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.97	8.11	12.31	---	13.92	14.03	14.94	---	14.99	17.46	18.98	14.74
10	15.29	13.30	14.11	---	14.58	14.45	14.93	14.96	15.24	17.85	19.50	15.07
15	14.95	14.38	13.15	---	14.63	10.29	---	14.99	15.54	17.70	19.95	15.86
20	14.99	14.80	13.85	---	7.40	11.48	---	14.86	15.74	18.17	19.48	16.59
25	15.33	14.85	14.05	14.44	12.33	12.81	---	14.94	16.42	18.55	17.38	17.23
EOM	14.78	6.05	14.20	14.42	11.87	13.22	---	14.94	16.98	18.42	15.08	17.86
WTR YEAR 1986	HIGHEST 4.50			NOV 28, 1985			LOWEST 20.08			AUG 17, 18, 1986		



## DAVIDSON COUNTY

360835086441100. Local number, Dv:L-10.

LOCATION.--Lat 36°08'35", long 86°44'11", Hydrologic Unit 05130202, 220 ft south of Elm Hill Pike, 0.3 mi west of Louisville and Nashville Railroad crossing, 0.4 mi east of Fesslers Lane in Nashville.  
Owner: U.S. Geological Survey.

AQUIFER.--Carters and Lebanon Limestones of middle Ordovician age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in., depth 262 ft, cased to 40 ft, open end.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 515 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing 2.5 ft above land-surface datum.

REMARKS.--Records good. No record from June 7 to June 11.

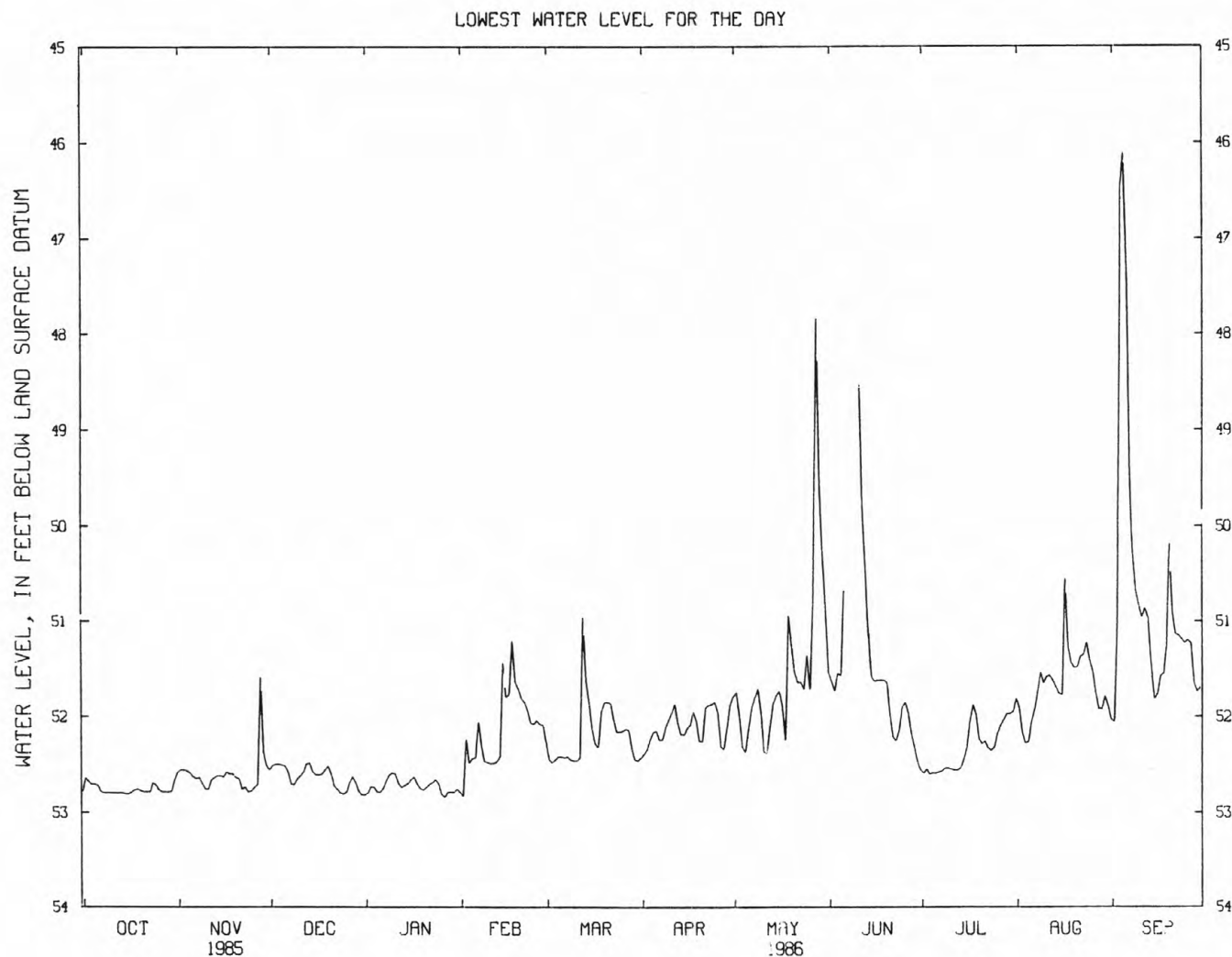
PERIOD OF RECORD.--June 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 44.06 ft below land-surface datum, Sept. 5, 1986; lowest water level 52.84 ft below land-surface datum, many days July and Aug., 1985, Jan. 27, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	52.71	52.59	52.51	52.79	52.44	52.42	52.16	52.37	51.57	52.59	52.27	46.10
10	52.80	52.76	52.65	52.59	52.48	52.46	52.03	51.96	---	52.54	51.65	50.83
15	52.81	52.62	52.58	52.70	51.43	51.86	52.19	51.78	51.58	52.45	51.76	51.82
20	52.78	52.64	52.52	52.77	51.71	51.85	52.26	51.25	51.64	52.24	51.49	50.18
25	52.72	52.78	52.81	52.70	52.08	52.16	51.85	51.35	51.90	52.32	51.42	51.23
EOM	52.66	52.52	52.82	52.76	52.09	52.46	51.87	50.81	52.47	51.95	51.89	51.70

WTR YR 1986 HIGHEST 44.06 SEP 5, 1986 LOWEST 52.84 JAN 27, 1986



## GROUND-WATER LEVELS

## DICKSON COUNTY

360429087233602. Local number, Di:F-19.

LOCATION.--Lat 36°04'29", long 87°23'36", Hydrologic Unit 06040003, on north side of State Highway 48, 0.4 mi northeast of State Highway 48 bridge over East Piney River at Dickson.

AQUIFER.--Fort Payne Formation of early Mississippian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 387 ft, cased to 22 ft, open end.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 755 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of instrument shelf, 1.26 ft above land-surface datum.

REMARKS.--Records fair. Missing record from Dec. 27 to Jan. 20, Apr. 1 to May 13 was due to equipment failure.

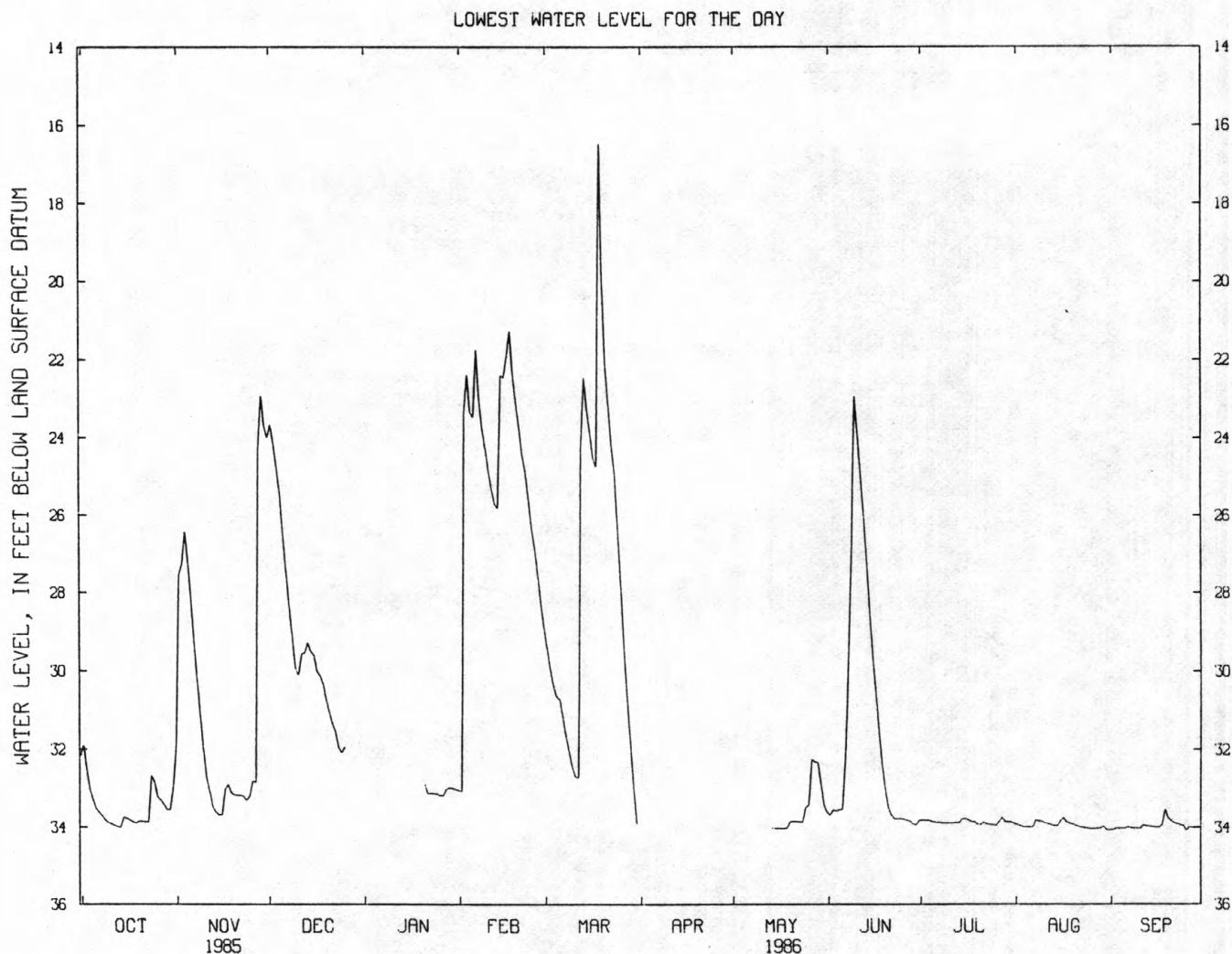
PERIOD OF RECORD.--July 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.52 ft below land-surface datum, Mar. 12, 13, 1975; lowest 34.13 ft below land-surface datum, Oct. 16, 1984.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	33.29	27.23	25.43	---	23.35	30.66	---	---	33.55	33.85	33.99	34.03
10	33.89	32.06	29.94	---	24.28	32.44	---	---	22.92	33.89	33.85	34.03
15	33.73	33.68	29.51	---	22.39	23.26	---	34.03	28.62	33.78	33.96	33.99
20	33.85	33.17	30.74	---	23.12	20.04	---	33.85	33.03	33.92	33.92	33.76
25	32.84	33.21	32.08	33.14	26.36	26.47	---	33.47	33.78	33.94	34.03	33.96
EOM	32.98	23.70	---	33.02	28.35	33.91	---	33.42	33.94	33.87	34.07	33.99

WTR YR 1986 HIGHEST 12.50 MAR 19, 1986 LOWEST 34.08 SEPT 26, 1986





## HAMILTON COUNTY

350234085181200. Local number, Hm:G-36.

LOCATION.--Lat 35°02'34", long 85°18'12", Hydrologic Unit 06020001, in Tennessee Valley Authority parking lot, Douglas Street in Chattanooga.  
Owner: Tennessee Valley Authority.

AQUIFER.--Knox Dolomite of Cambrian and Ordovician age.

WELL CHARACTERISTICS.--Drilled artesian test well, diameter 16 in. to 120 ft, 6 in. to 250 ft, cased to 27 ft, open end.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 670.3 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 1.5 ft above land-surface datum.

REMARKS.--The well has been pumped at rates up to 1,200 gal/min over a 68 hour period indicating a specific capacity of 20.4 [(gal/min)/ft].

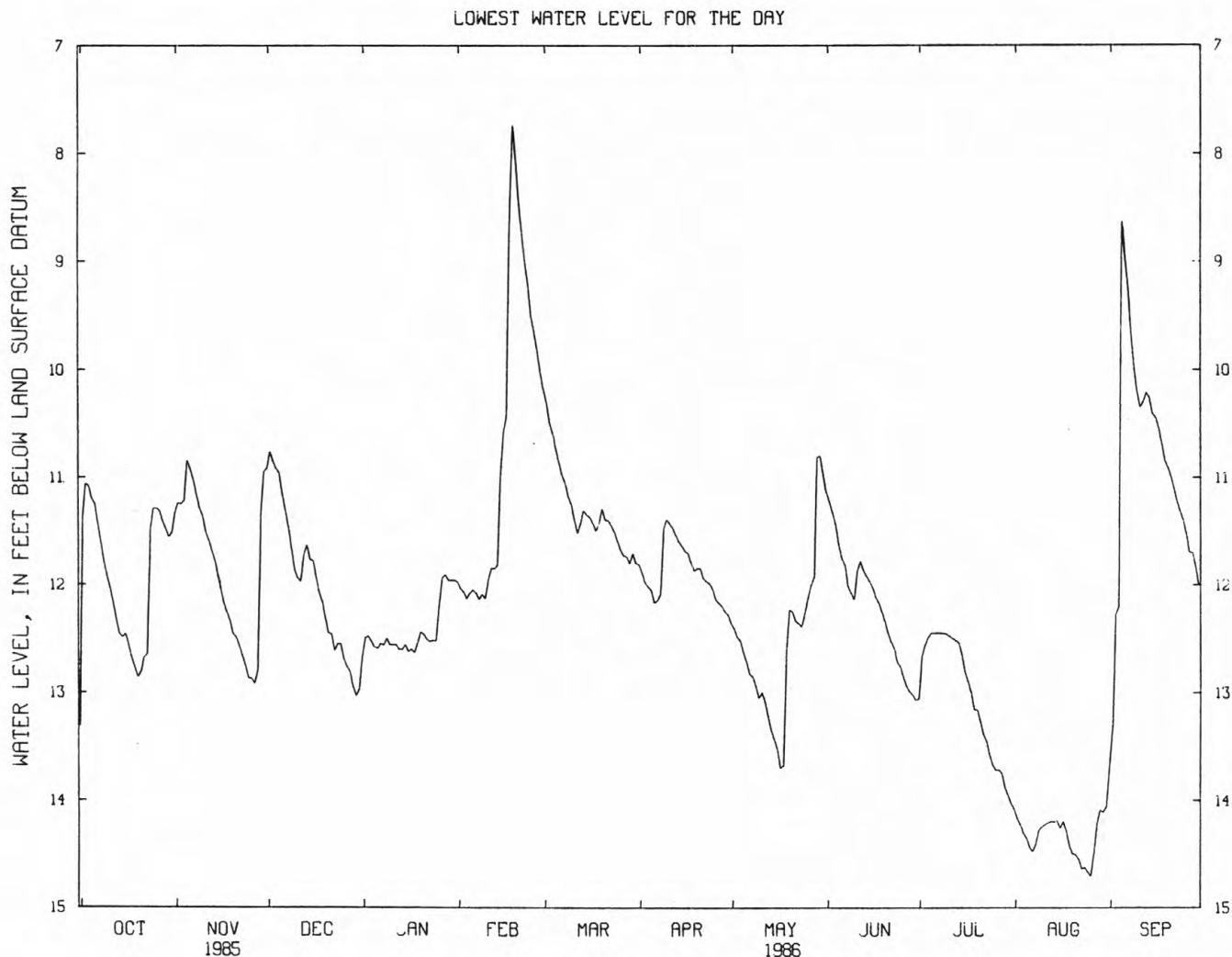
PERIOD OF RECORD.--April 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.35 ft below land-surface datum, Dec. 1, 1982; lowest, 14.71 ft below land-surface datum, Oct. 8, 1984, Aug. 26, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.20	10.84	10.96	12.58	12.08	10.74	12.05	12.63	11.63	12.45	14.35	8.63
10	11.93	11.36	11.87	12.56	12.13	11.25	11.39	13.05	12.14	12.46	14.25	10.20
15	12.49	11.92	11.77	12.56	11.01	11.35	11.64	13.43	11.97	12.65	14.19	10.41
20	12.86	12.46	12.31	12.44	8.04	11.29	11.85	12.23	12.34	13.16	14.50	10.91
25	11.29	12.87	12.55	12.52	9.50	11.60	12.04	12.26	12.76	13.67	14.67	11.39
EOM	11.52	10.95	12.97	11.96	10.02	11.80	12.28	10.98	13.07	14.03	14.06	12.00

WTR YR 1986 HIGHEST 7.48 FEB 19, 1986 LOWEST 14.71 AUG 26, 1986



GROUND-WATER LEVELS  
HAMILTON COUNTY--Continued

351428085003600. Local number, Hm:0-15.

LOCATION.--Lat 35°14'28", long 85°00'36", Hydrologic Unit 06020001, at Smith Road and State Highway 58, near Snow Hill.

Owner: Savannah Valley Utility District.

AQUIFER.--Knox Dolomite of Cambrian and Ordovician age.

WELL CHARACTERISTICS.--Drilled artesian test well, diameter 10 in., depth 262 ft, cased to 50 ft, open end.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 735 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of back shelter panel, 8.00 ft above land-surface datum.

REMARKS.--Well previously published as "at Savannah Valley". Water level affected intermittently by pumping from municipal supply well 300 ft south. Negative values indicate water levels above land-surface. Missing record from July 13-30 due to equipment failure.

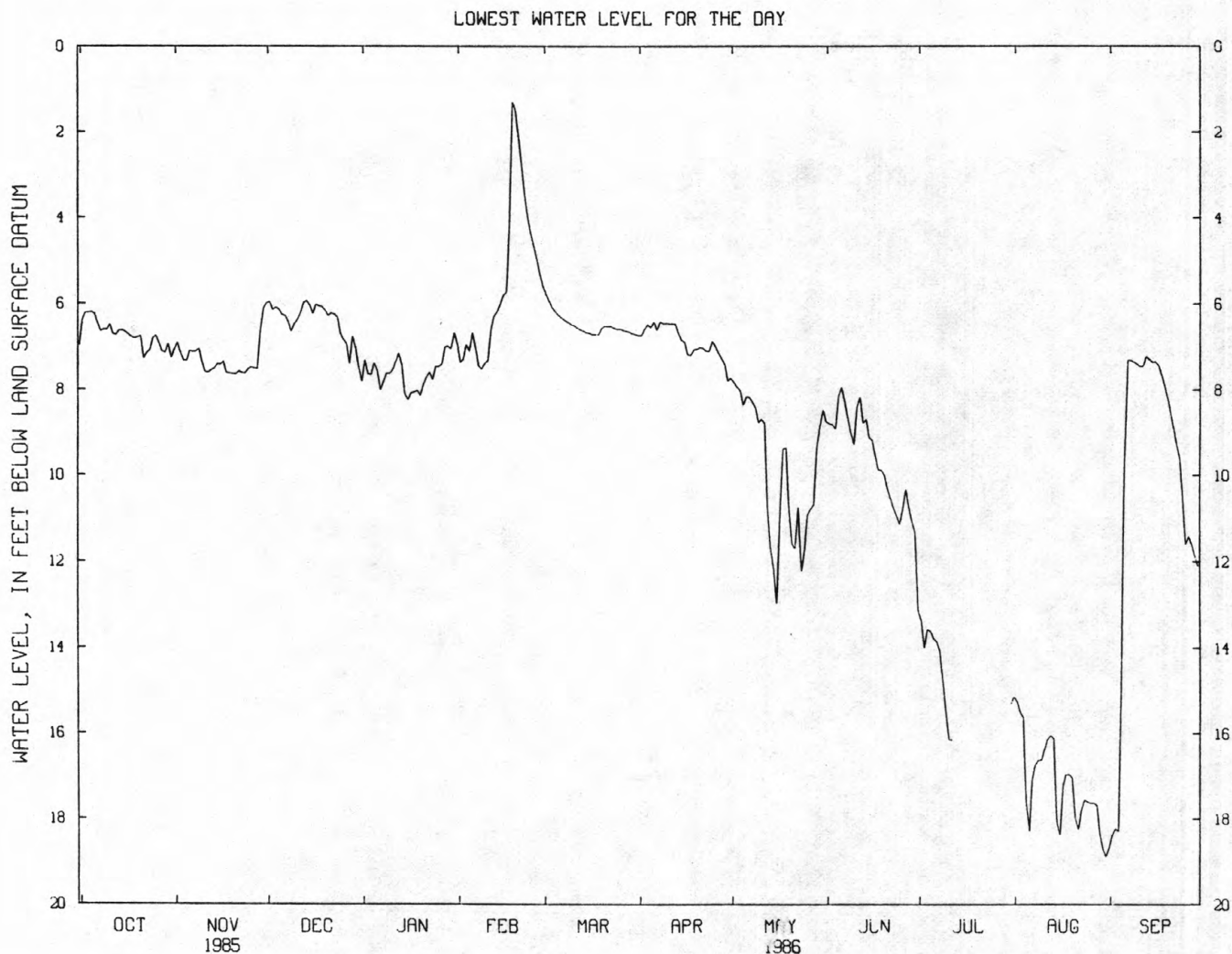
PERIOD OF RECORD.--May 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.40 ft above land-surface datum, May 31, 1979; lowest, 18.88 ft below land-surface datum, Aug. 31, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.20	7.33	6.13	7.38	7.10	6.19	6.55	8.36	8.14	13.62	17.62	14.33
10	6.61	7.37	6.48	7.63	7.39	6.48	6.46	8.78	9.27	15.54	16.62	7.40
15	6.62	7.41	6.04	8.11	6.01	6.67	6.85	12.16	9.13	---	18.08	7.35
20	6.79	7.64	6.16	8.14	1.47	6.57	7.06	10.75	10.00	---	17.03	8.22
25	6.80	7.53	6.71	7.46	4.40	6.59	6.88	11.76	11.15	---	17.60	10.50
EOM	7.26	6.09	7.49	6.67	5.35	6.72	7.80	8.47	11.34	15.30	18.88	12.11

WTR YR 1986 HIGHEST 0.49 FEB 19, 1986 LOWEST 18.88 AUG 31, 1986



## HUMPHREYS COUNTY

360020087573300. Local number, Hs:H-1.

LOCATION.--Lat 36°00'20", long 87°57'33", Hydrologic Unit 06040005, 100 ft north of Woodland Drive at New Johnsonville.  
Owner: A. M. Powers.

AQUIFER.--Camden Chert of early Devonian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 187 ft, cased to 72 ft, open end.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 470 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.00 ft above land-surface datum.

REMARKS.--Records good.

PERIOD OF RECORD.--February 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 84.31 ft below land-surface datum, May 25, 1983; lowest, 90.20 ft below land-surface datum, Nov. 25, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	87.13	86.92	86.66	86.80	86.63	86.50	86.44	86.67	86.82	87.06	87.26	87.22
10	87.22	87.01	86.71	86.83	86.57	86.57	86.42	86.93	86.66	87.12	87.20	87.29
15	87.24	87.01	86.66	86.87	86.48	86.42	86.47	86.87	86.76	87.08	87.27	87.34
20	87.16	87.02	86.68	86.78	86.25	86.36	86.49	86.84	86.92	87.14	87.23	87.26
25	87.05	86.94	86.72	86.82	86.39	86.31	86.62	86.75	86.98	87.27	87.30	87.21
EOM	86.94	86.68	86.73	86.92	86.48	86.33	86.68	86.72	86.99	87.15	87.41	87.28

WTR YR 1986 HIGHEST 86.18 FEB 19, 20, MAR 18, 1986 LOWEST 87.42 AUG 28-30, 1986



## GROUND-WATER LEVELS

## LAUDERDALE COUNTY

353839089493500. Local number, Ld:F-4.

LOCATION.--Lat 35°38'39", long 89°49'35", Hydrologic Unit 08010208, 1.1 mi north of State Highway 87, at Fort Pillow State Park.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 to 6 to 3 in., depth 879 ft, cased to 869 ft, screened 869 to 879 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 437.05 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of casing, 2.80 ft above land-surface datum.

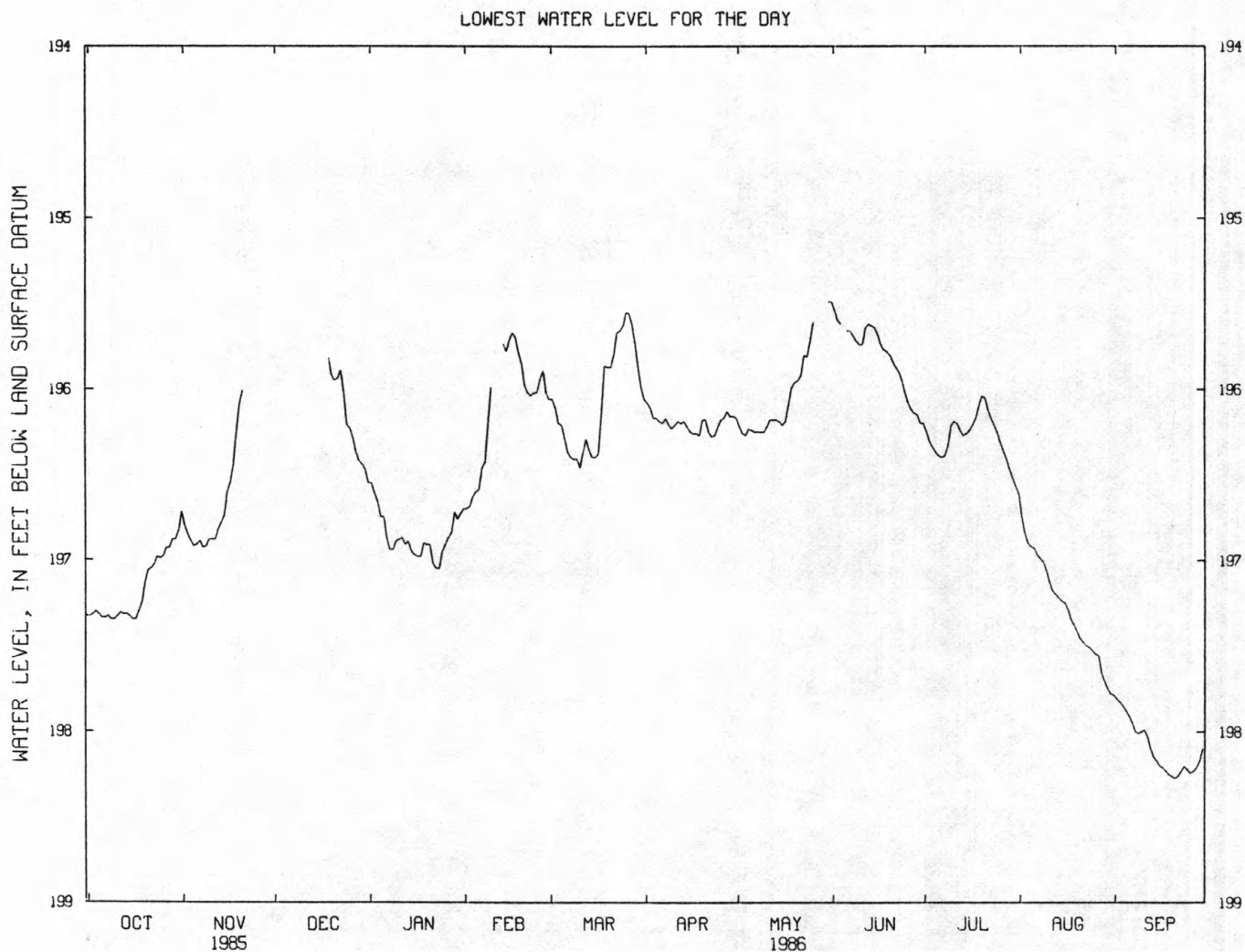
REMARKS.--No record Nov. 22 to Dec. 18, Feb. 11-13, May 27-30, June 5-6.

PERIOD OF RECORD.--April 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 187.76 ft below land-surface datum, Apr. 7, 1975; lowest, 198.27 ft below land-surface datum, September 21, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	197.32	196.92	---	196.75	196.60	196.21	196.17	196.23	---	196.37	196.92	197.88
10	197.35	196.88	---	196.89	195.99	196.41	196.23	196.25	195.74	196.21	197.06	198.00
15	197.33	196.74	---	196.95	195.78	196.40	196.22	196.19	195.64	196.26	197.24	198.17
20	197.13	196.09	195.92	196.91	195.85	195.87	196.18	195.96	195.80	196.04	197.42	198.26
25	196.99	---	196.21	196.95	196.02	195.63	196.22	195.72	196.02	196.25	197.53	198.22
EOM	196.83	---	196.47	196.73	196.02	195.99	196.16	195.49	196.20	196.57	197.78	198.10
WTR YEAR 1986	HIGHEST		195.48	JUNE 1, 1986		LOWEST	198.27	SEP 21, 1986				





## LAUDERDALE COUNTY--Continued

354158089384300. Local number, Ld:G-12.

LOCATION.--Lat 35°41'58", long 89°38'43", Hydrologic Unit 08010208, 130 ft west of Glimp-Ripley Road, 0.1 mi northeast of State Highway 87 at Glimp.  
Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 440 ft, cased to 420 ft, screened 420 to 440 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 360 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Inside top of shelter base plate, 2.70 ft above land-surface datum.

REMARKS.--No record February 15 to April 7, June 11 to September 30.

PERIOD OF RECORD.--October 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 101.02 ft below land-surface datum, May 29, 1983; lowest, 106.45 ft below land-surface datum, Oct. 29, 30, 1983.

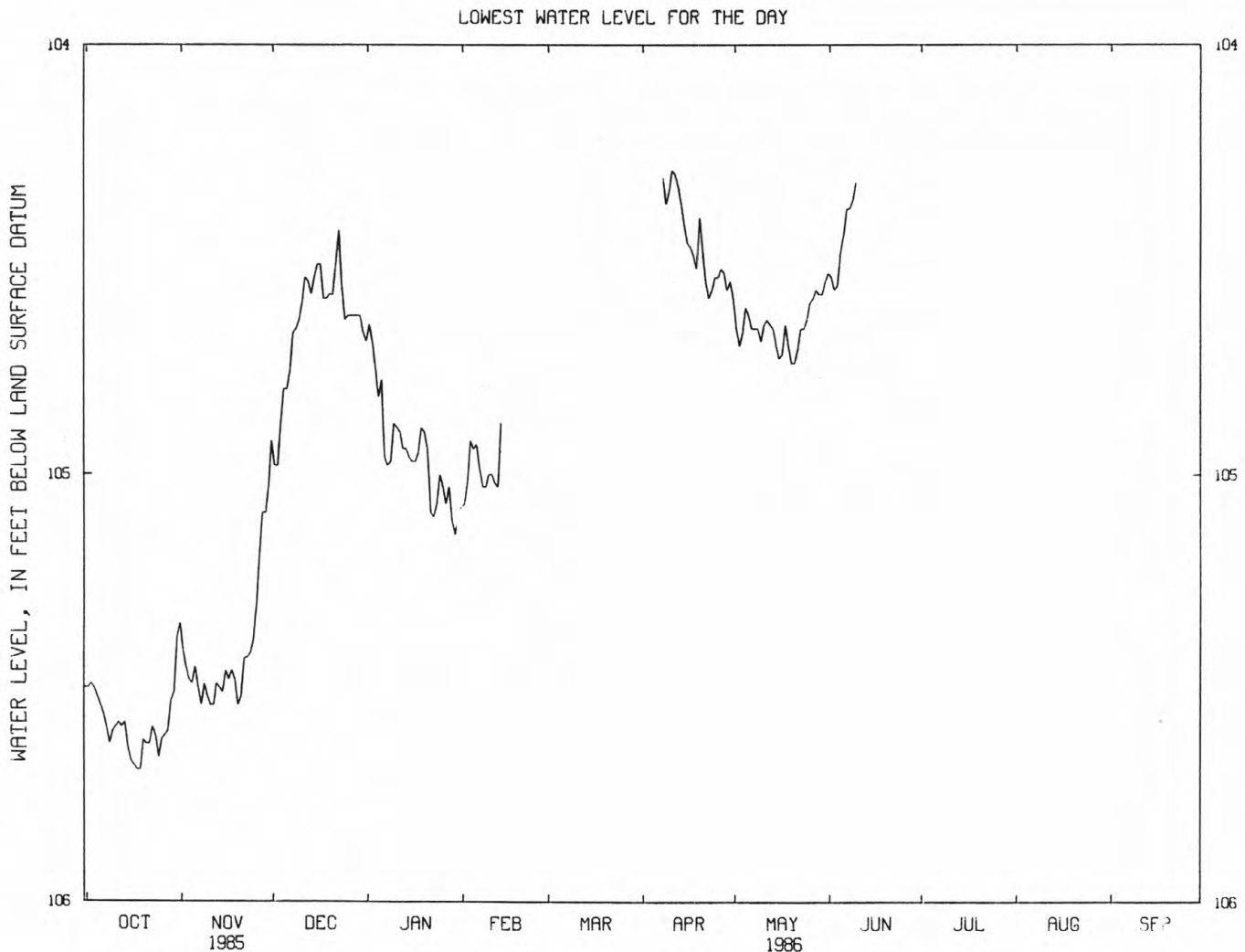
WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	105.52	105.49	104.80	104.82	104.94		---	104.61	104.48			
10	105.60	105.52	104.64	104.88	105.00		104.34	104.69	104.32			
15	105.64	105.51	104.54	104.96	---		104.42	104.70	---			
20	105.62	105.54	104.58	104.90	---		104.40	104.74	---			
25	105.66	105.39	104.64	105.00	---		104.54	104.64	---			
EOM	105.38	105.03	104.67	105.08	---		104.55	104.55	---			

WTR YEAR 1986 HIGHEST \*104.25 APR 8, 1986 LOWEST †105.69 OCT 18, 19, 1985

\* May have been higher during period of missing record.

† May have been lower during period of missing record.



## GROUND-WATER LEVELS

## LAUDERDALE COUNTY--Continued

354357089271701. Local number, Ld:J-5.

LOCATION.--Lat 35°43'57", long 89°27'17", Hydrologic Unit 08010208, 50 ft southeast of Conner Church Road, 1.7 mi north of State Highway 19 and 2.5 mi northwest of Nutbush.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Cockfield Formation of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 277 ft, cased to 257 ft, screened 257 to 277 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 469 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Inside top of shelter base plate, 2.80 ft above land-surface datum.

REMARKS.--Records good.

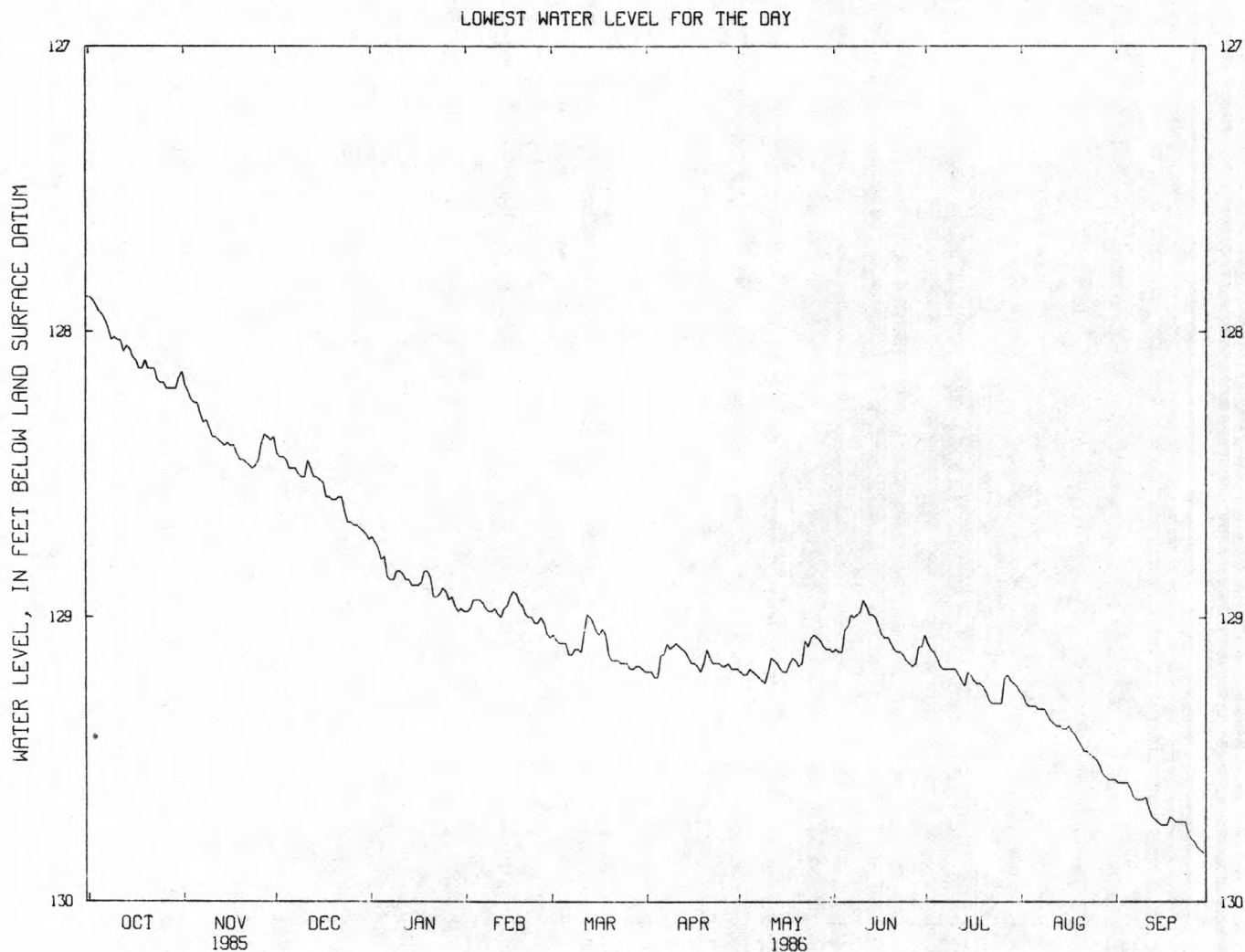
PERIOD OF RECORD.--March 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 127.14 ft below land-surface datum, July 6, 1985; lowest, 130.89 ft below land-surface datum, Nov. 15, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	127.93	128.25	128.45	128.80	128.94	129.09	129.21	129.18	129.07	129.14	129.31	129.58
10	128.02	128.34	128.51	128.84	128.98	129.11	129.10	129.23	128.98	129.18	129.34	129.64
15	128.06	128.40	128.51	128.89	128.96	129.02	129.14	129.18	129.00	129.19	129.39	129.72
20	128.10	128.45	128.59	128.84	128.96	129.13	129.16	129.15	129.09	129.24	129.43	129.71
25	128.18	128.47	128.67	128.90	129.02	129.16	129.16	129.07	129.15	129.30	129.49	129.76
EOM	128.16	128.38	128.71	128.97	129.06	129.18	129.18	129.11	129.10	129.24	129.57	129.83

WTR YEAR 1986      HIGHEST 127.87    OCT 1, 1985      LOWEST 129.83    SEP 30, 1986





## LAUDERDALE COUNTY--Continued

355251089350500. Local number, Ld:S-2.

LOCATION.--Lat 35°52'51", long 89°35'05", Hydrologic Unit 08010100, about 0.7 mi east of Old Bed Forked Deer River, 3 mi west of Knob Creek.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Alluvial sand and gravel of Holocene and Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in., depth 100 ft, cased to 80 ft, screened 80 to 100 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 254 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Inside top of shelter base plate, 3.20 ft above land-surface datum.

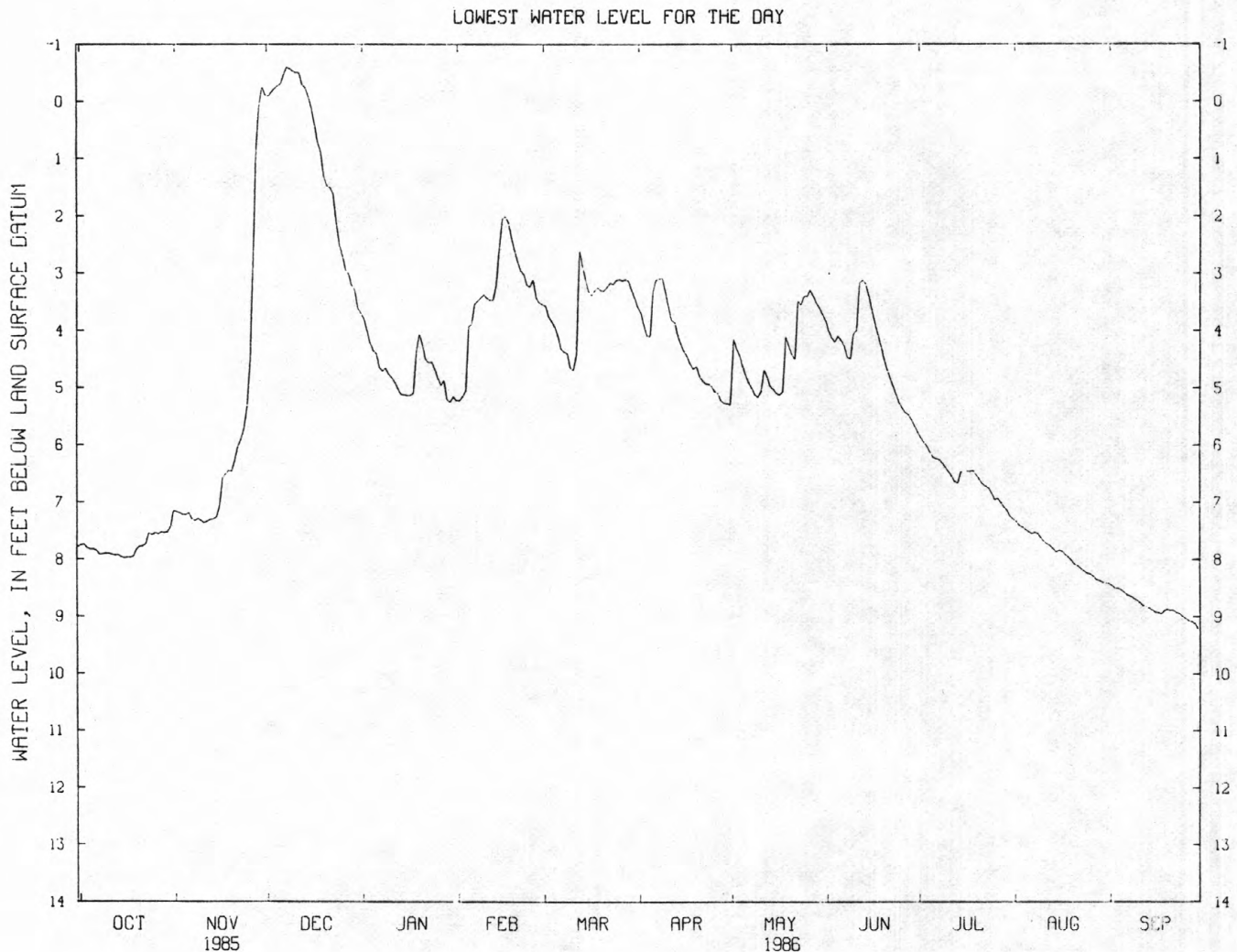
REMARKS.--Negative values indicate water levels above land-surface. Records good.

PERIOD OF RECORD.--October 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.06 ft above land-surface datum, Dec. 11, 1982 and Mar. 6, 1985; lowest, 9.45 ft below land-surface datum, Oct. 16, 17, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.83	7.22	-0.27	4.35	3.92	3.94	4.10	4.62	4.10	6.13	7.48	8.53
10	7.90	7.33	-0.53	4.77	3.37	4.65	3.34	5.17	4.05	6.39	7.62	8.71
15	7.96	7.27	-0.08	5.13	2.58	3.11	4.24	5.03	3.39	6.47	7.87	8.88
20	7.83	6.46	1.32	4.06	2.61	3.30	4.63	4.27	4.50	6.52	8.02	8.87
25	7.58	5.34	2.51	4.68	3.24	3.12	4.98	3.40	5.27	6.84	8.24	9.00
EOM	7.45	-0.26	3.62	5.16	3.52	3.44	5.28	3.72	5.68	7.25	8.41	9.22
WTR YEAR 1986	HIGHEST		-0.67	DEC 8, 1985	LOWEST		9.22	SEP 30, 1986				





## LAWRENCE COUNTY

352610087182401. Local number, LN:R-014.

LOCATION.--Lat 35°26'10", long 87°18'24", Hydrologic Unit 06040004, 0.1 mile north of U.S. Post Office, at Summertown.

Owner: Summertown Utility District.

AQUIFER.--Fort Payne Formation of Early Mississippian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 147 ft, cased to 135 ft, open end.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 1,014.9 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of instrument shelf, 1.0 ft above land-surface datum.

REMARKS.--Records good.

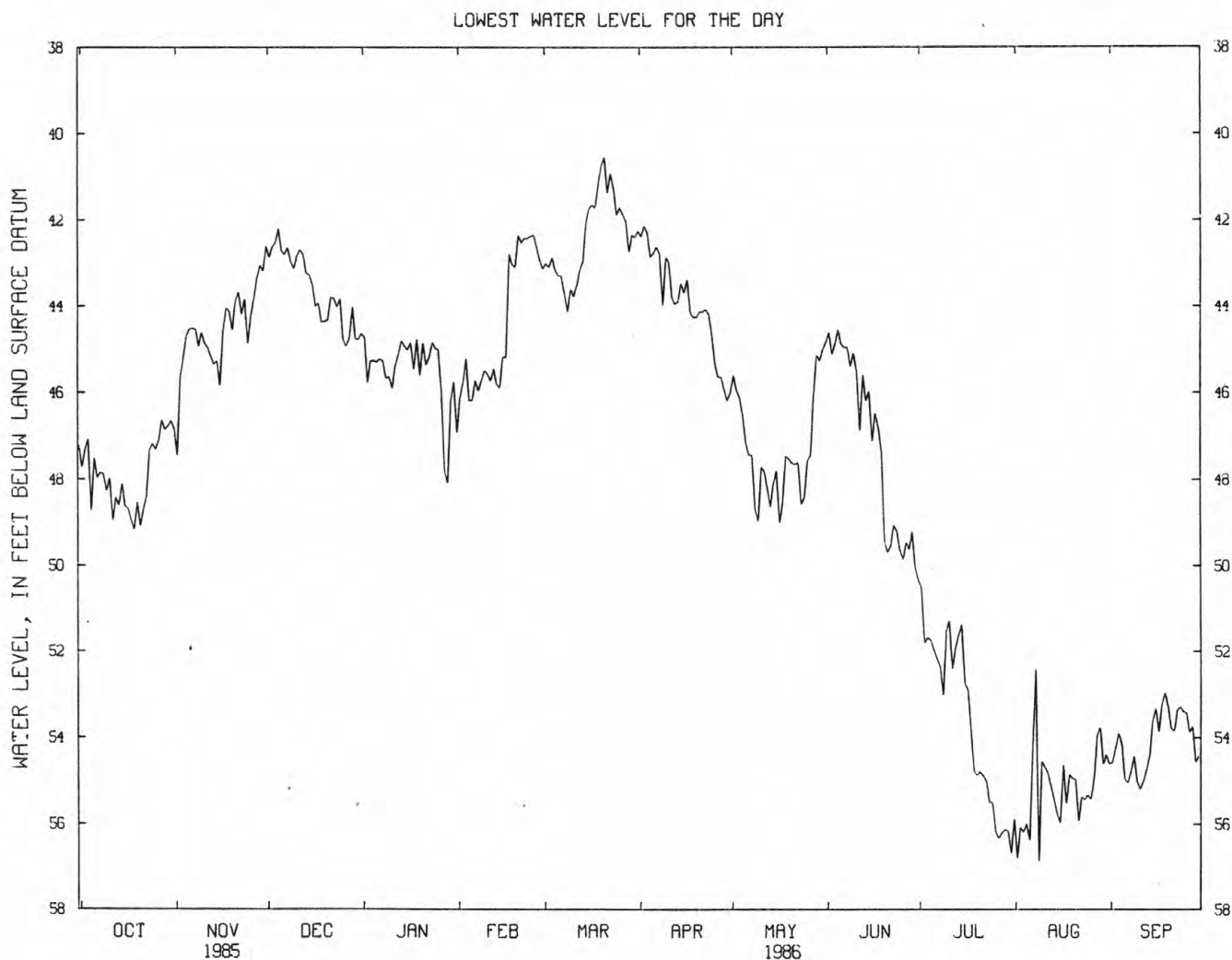
PERIOD OF RECORD.--July 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 38.03 ft below land-surface datum, Mar. 19, 1986; lowest, 56.89 ft below land-surface datum, Aug. 9, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	48.73	44.70	42.20	45.27	46.19	43.16	42.87	46.53	44.55	51.74	56.00	54.15
10	48.28	44.61	43.14	45.65	45.49	43.60	42.86	48.97	45.09	51.52	54.53	55.02
15	48.10	45.28	43.27	44.94	45.89	42.07	43.47	48.09	45.97	51.38	55.77	53.60
20	48.52	44.57	44.36	45.62	43.10	40.72	44.26	47.53	49.45	54.87	54.94	53.28
25	47.18	44.88	43.84	44.98	42.38	41.88	44.67	48.42	49.66	55.51	55.33	53.40
EOM	46.66	43.18	44.78	45.75	42.94	42.40	46.19	45.01	50.06	56.69	54.39	54.43

WTR YR 1986 HIGHEST 38.03 MAR 19, 1986 LOWEST 56.89 AUG 9, 1986



## MADISON COUNTY

354223088380200. Local number, Md:N-1.

LOCATION.--Lat 35°42'23", long 88°38'02", Hydrologic Unit 08010205, about 0.4 mi east of Claybrook.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--McNairy Sand of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 to 4 in., depth 659 ft, cased to 639 ft, screened 639 to 659 ft.

INSTRUMENTATION.--Periodic measurements until May 16, 1986, when water-level recorder was installed.

DATUM.--Elevation of land-surface datum is 562.70 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of casing, 2.80 ft above land-surface datum.

PERIOD OF RECORD.--June 1949 to current year. Analog record June 1949 to February 1971, periodic tape measurements or monthly maximum-minimum recorder thereafter until May 16, 1986 when water-level recorder was installed.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 124.50 ft below land-surface datum, Mar. 10, 1952; lowest recorded, 129.13 ft below land-surface datum, Nov. 15, 1963; highest water level measured, 124.98 ft below land-surface datum, Apr. 8, 1980; lowest measured, 131.17 ft below land-surface datum, June 20, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

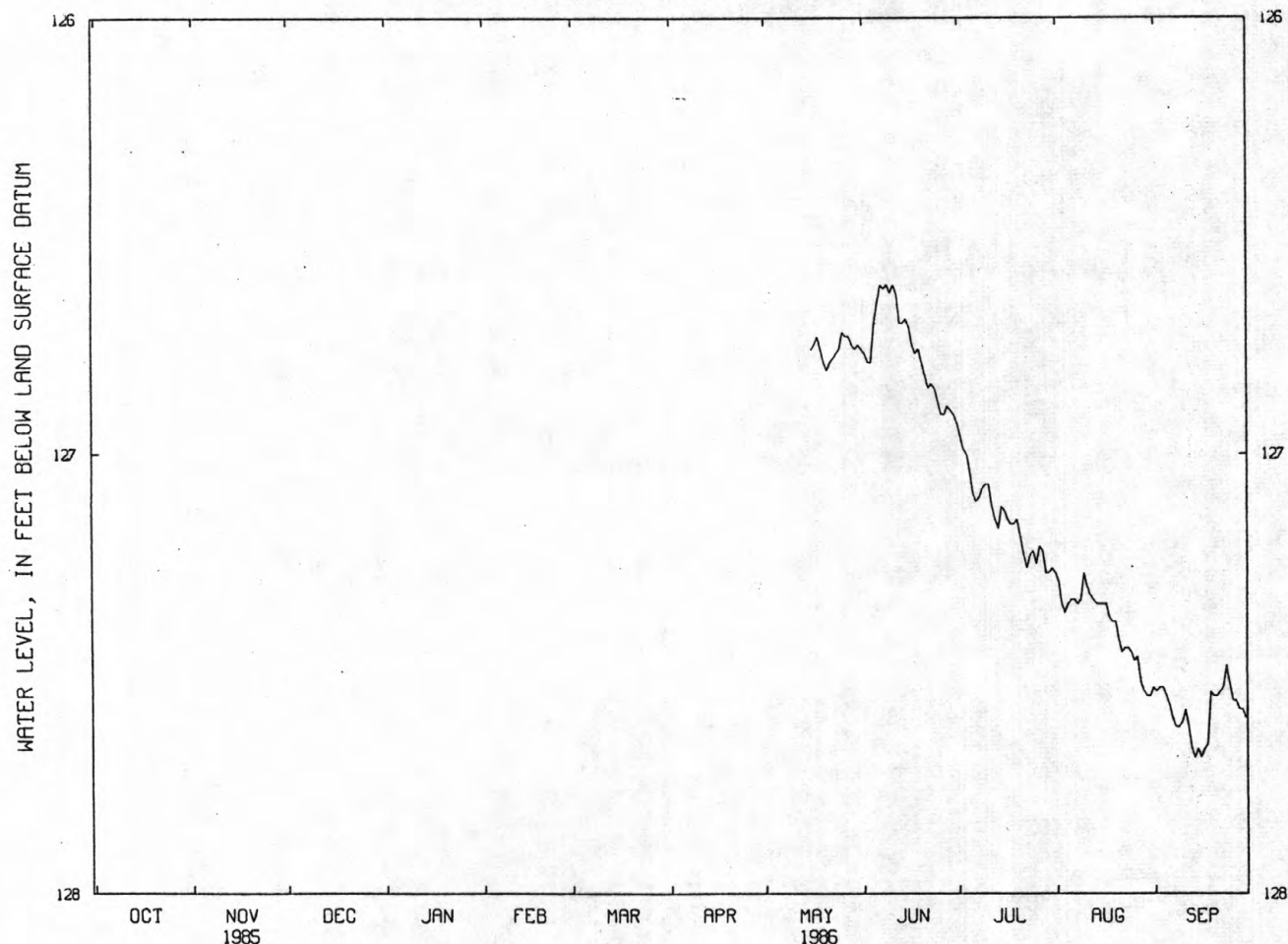
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 13	126.76	JAN 2	126.59	FEB 13	126.72	MAR 25	126.65	MAY 7	126.63

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5								---	126.70	127.04	127.34	127.55
10								999	126.63	127.07	127.27	127.61
15								---	126.69	127.12	127.34	127.67
20								126.79	126.79	127.15	127.38	127.55
25								126.76	126.88	127.22	127.45	127.52
EOM								126.75	126.91	127.26	127.55	127.60

WTR YEAR 1986 HIGHEST 126.55 JUN 7, 1986 LOWEST 127.69 SEP 14-16, 1986

LOWEST WATER LEVEL FOR THE DAY



## MORGAN COUNTY

360543084343101.--Local number, Mg:F-5.

LOCATION.--Lat 36°05'43", long 84°34'31", Hydrologic Unit 06010208, 1.0 mi southeast of Wartburg.  
Owner: Plateau Utility District.

AQUIFER.--Sandstone of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 394 ft, cased to 20 ft, open end.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 1,265 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of recorder shelter, 2.40 ft above land surface datum.

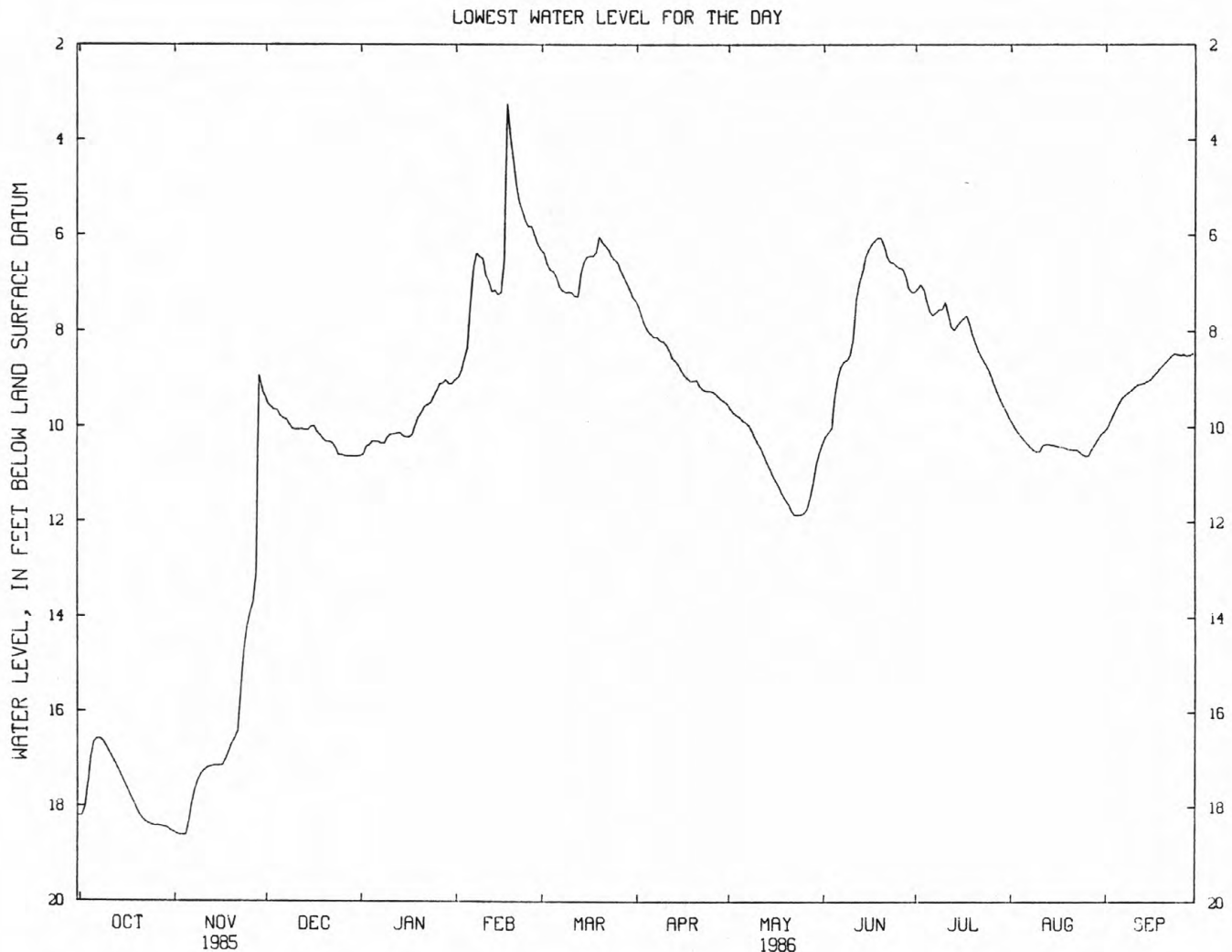
REMARKS.--Highest water level readings may be influenced for short periods by surface inflow.

PERIOD OF RECORD.--November 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.89 ft below land-surface datum, Feb. 18, 1986; lowest, 19.61 ft below land-surface datum, Aug. 17, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, NOVEMBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.94	18.61	9.65	10.31	8.35	6.76	8.00	9.80	9.34	7.39	10.21	9.60
10	16.74	17.31	10.05	10.22	6.49	7.19	8.22	10.23	8.51	7.55	10.52	9.22
15	17.38	17.15	10.07	10.19	7.24	6.56	8.71	10.89	6.45	7.88	10.38	9.04
20	18.07	16.69	10.27	9.80	4.44	6.04	9.04	11.54	6.07	8.10	10.46	8.72
25	18.41	14.22	10.60	9.37	5.83	6.51	9.25	11.85	6.64	8.79	10.58	8.49
EOM	18.52	9.23	10.63	9.10	6.20	7.30	9.47	10.54	7.19	9.68	10.15	8.47
WTR YR 1986	HIGHEST 2.89			FEB 18, 1986			LOWEST 18.61			NOV 3-5, 1985		



## PUTNAM COUNTY

360521085432600. Local number, Pm:C-1.

LOCATION.--Lat 36°05'21", long 85°43'26", Hydrologic Unit 05130108, at Interstate 40 and State Highway 56, at Silver Point.

Owner: Tennessee Department of Transportation.

AQUIFER.--Fort Payne Formation of early Mississippian age.

WELL CHARACTERISTICS.--Drilled test water-table well, diameter 6 in., depth 175 ft, cased to 60 ft, open end.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 1,030 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of instrument shelf, 2.88 ft above land surface datum.

REMARKS.--Record good. No record April 15 to April 20.

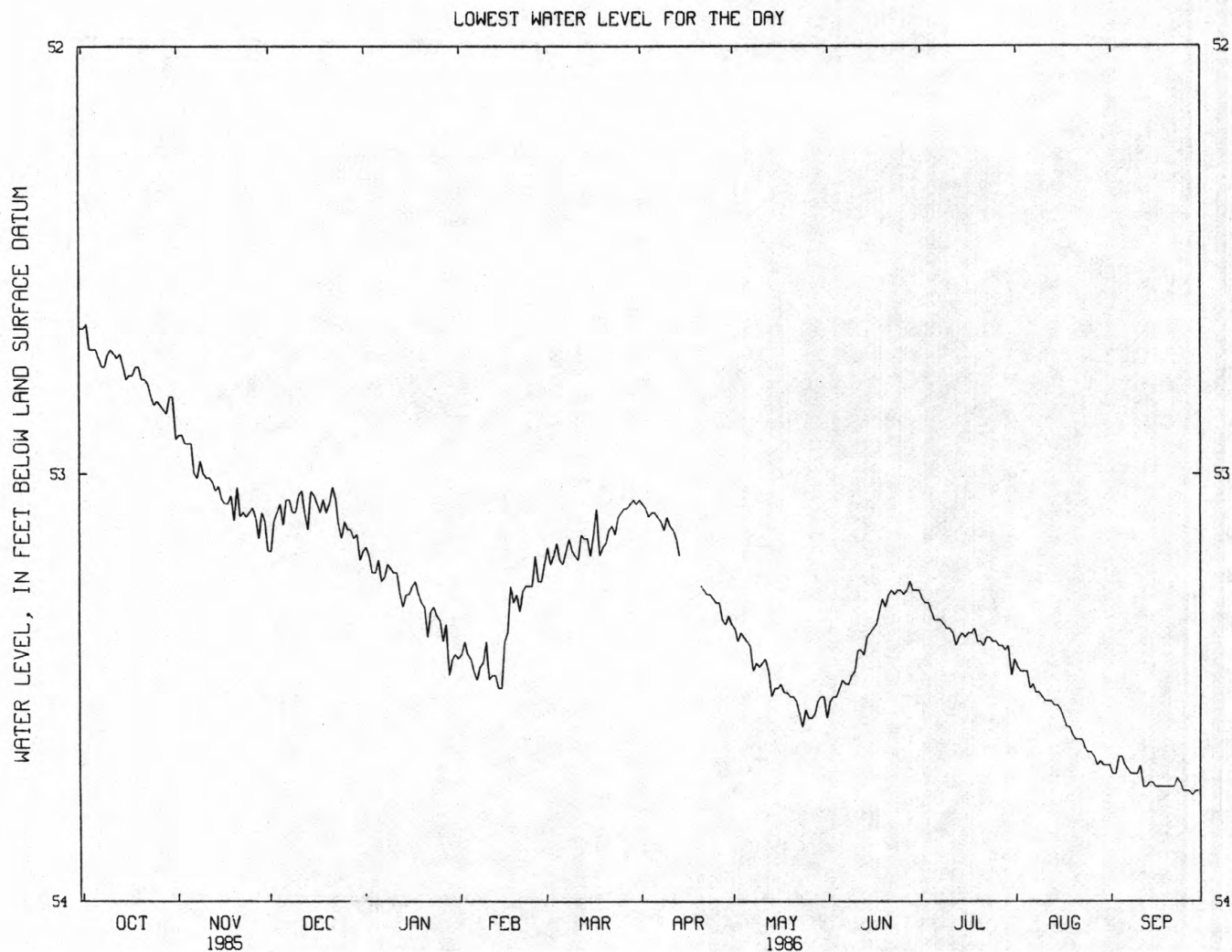
PERIOD OF RECORD.--March 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 48.30 ft below land-surface datum, May 2, 1974; lowest, 53.75 ft below land-surface datum, Sept. 28, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	52.71	52.93	53.07	53.23	53.43	53.16	53.09	53.38	53.50	53.32	53.46	53.66
10	52.72	53.00	53.09	53.22	53.39	53.18	53.10	53.45	53.46	53.36	53.52	53.70
15	52.75	53.03	53.04	53.28	53.50	53.15	---	53.50	53.37	53.37	53.54	53.72
20	52.75	53.11	53.09	53.30	53.28	53.17	---	53.52	53.31	53.39	53.61	53.73
25	52.84	53.09	53.15	53.33	53.26	53.10	53.29	53.55	53.27	53.39	53.65	53.74
EOM	52.82	53.11	53.20	53.42	53.25	53.07	53.33	53.52	53.27	53.47	53.68	53.74

WTR YR 1986 HIGHEST 52.60 OCT 4, 1985 LOWEST 53.75 SEPT 28, 1986





## SEVIER COUNTY

353922083345600. Local number, Sv:E-2.

LOCATION.--Lat 35°39'22", long 83°34'56", Hydrologic Unit 06010201, 3.3 mi southwest of Great Smoky Mountains National Park Headquarters, near Gatlinburg.

AQUIFER.--Elkmont Sandstone of Precambrian age.

WELL CHARACTERISTICS.--Drilled unused water-table well in phyllite, sandstone, diameter 6 in., depth 220 ft, cased to 27 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 2,150 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of recorder shelter 1.50 ft above land surface datum.

REMARKS.--Highest water level readings may be influenced for short periods by surface inflow.

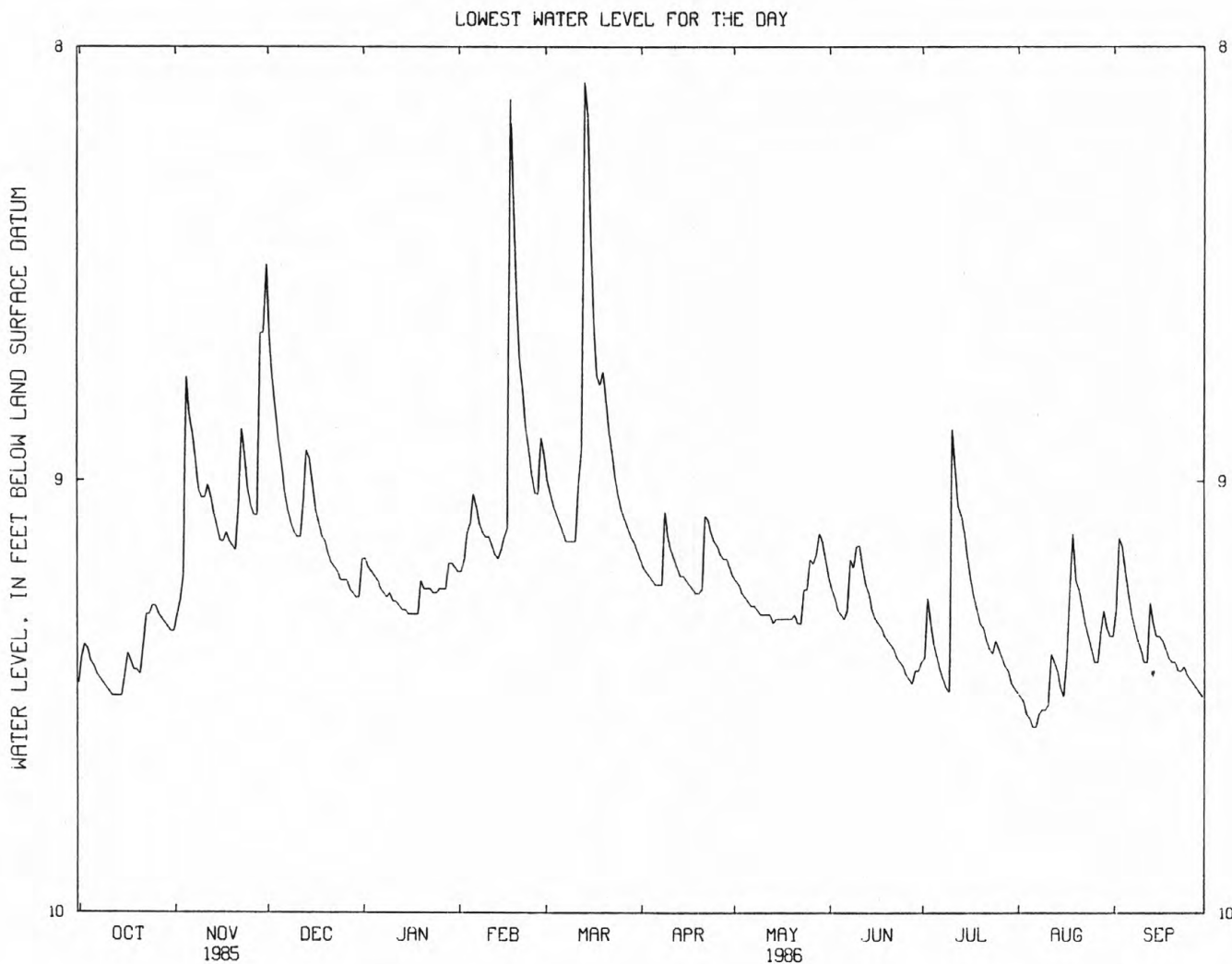
PERIOD OF RECORD.--May 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.58 ft below land surface datum, Feb. 1, 1985; lowest, 9.68 ft below land surface datum, Aug. 10, Sept. 16, 17, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.42	8.76	8.91	9.22	9.10	9.08	9.23	9.27	9.31	9.38	9.55	9.21
10	9.48	9.04	9.12	9.26	9.13	9.14	9.13	9.31	9.15	9.49	9.53	9.39
15	9.50	9.11	8.95	9.30	9.16	8.16	9.22	9.32	9.30	9.12	9.48	9.36
20	9.44	9.15	9.14	9.23	8.57	8.75	9.26	9.32	9.37	9.33	9.23	9.42
25	9.29	9.02	9.23	9.26	8.99	9.04	9.14	9.25	9.43	9.37	9.39	9.45
EOM	9.35	8.66	9.27	9.20	8.90	9.16	9.20	9.18	9.44	9.48	9.36	9.50

WTR YEAR 1986      HIGHEST 7.72    MAR 13, 1986      LOWEST 9.57    AUG 6, 7, 1986



## GROUND-WATER LEVELS

## SHELBY COUNTY

350514089553700. Local number, Sh:K-75.

LOCATION.--Lat 35°05'14", long 89°55'37", Hydrologic Unit 08010211, at Willowview Ave. and Getwell Road, Memphis.  
Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Fluvial sand and gravel of Pleistocene age and possibly sand of Eocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in., depth 91 ft, cased to 81 ft, screened 81 to 91 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 260 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.20 ft above land-surface datum.

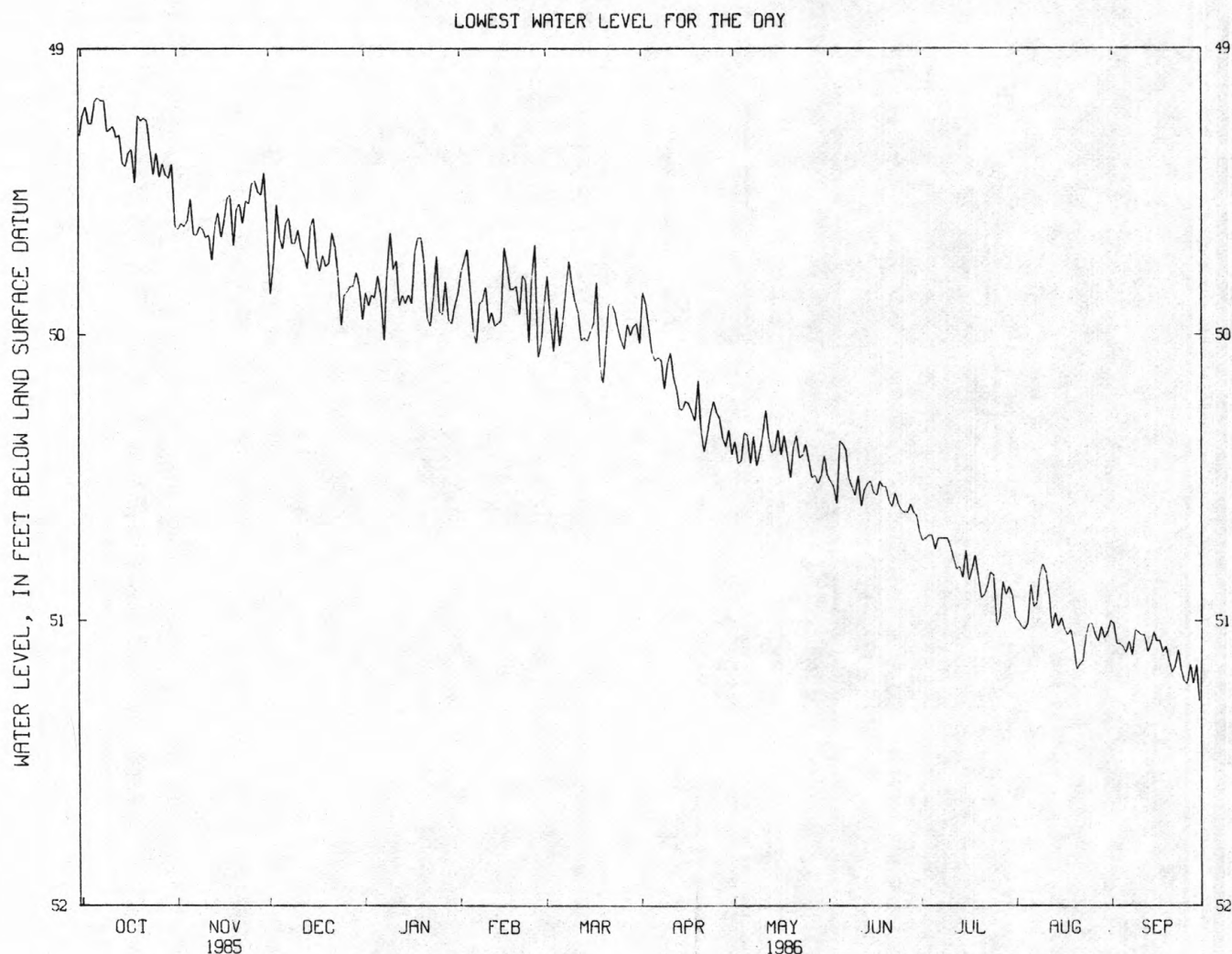
REMARKS.--Water levels affected by pumpage for Memphis municipal water supply. Records good.

PERIOD OF RECORD.--August 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.28 ft below land-surface datum, April 2, 1950; lowest, 51.28 ft below land-surface datum, September 30, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	49.26	49.60	49.66	49.87	49.83	49.90	50.06	50.34	50.37	50.70	51.01	51.09
10	49.29	49.63	49.68	49.64	49.83	49.82	50.10	50.41	50.56	50.71	50.80	51.04
15	49.40	49.57	49.62	49.89	49.95	50.02	50.26	50.40	50.51	50.85	51.02	51.04
20	49.23	49.69	49.76	49.66	49.83	50.17	50.16	50.50	50.53	50.84	51.09	51.14
25	49.44	49.54	49.97	49.72	49.80	49.98	50.23	50.38	50.61	50.84	51.01	51.21
EOM	49.40	49.43	49.83	49.90	50.03	49.96	50.33	50.42	50.63	50.91	51.04	51.28
WTR YEAR 1986	HIGHEST 49.05		OCT 7, 1985		LOWEST 51.28		SEP 30, 1986					



## SHELBY COUNTY--Continued

351435090005200. Local number, Sh:0-1.

LOCATION.--Lat 35°14'35", long 90°00'52", Hydrologic Unit 08010209, west side of O.K. Robertson Road 0.4 mi north of U.S. Highway 51, Memphis.

Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 434 ft, cased to 424 ft, screened 424 to 434 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 228.70 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of casing, 4.30 ft above land-surface datum.

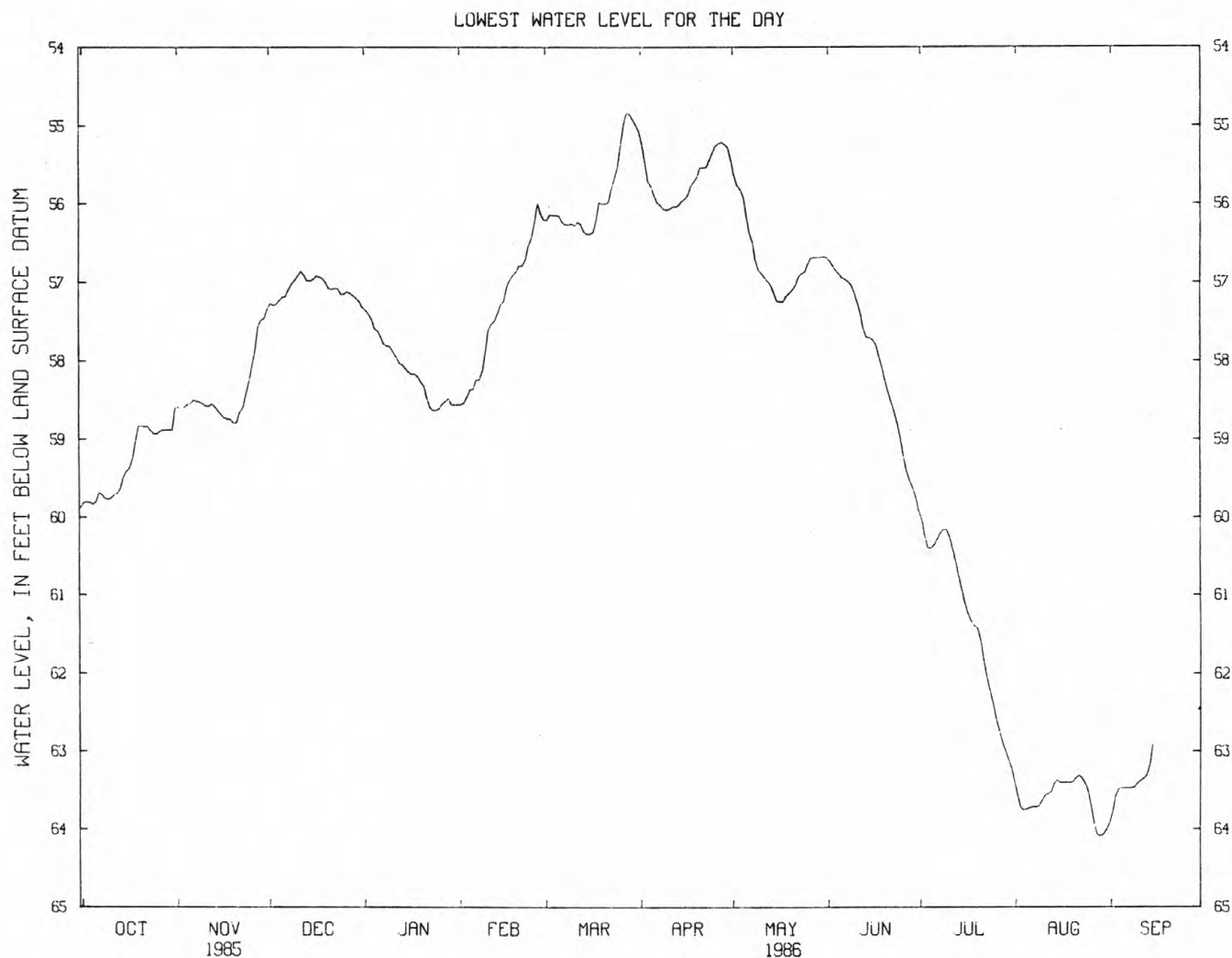
REMARKS.--Water levels affected by pumpage for Memphis municipal water supply. No record September 16-29.

PERIOD OF RECORD.--September 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.65 ft below land-surface datum, September 3, 1940; lowest, 64.09 ft below land-surface datum, August 29, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	59.83	58.56	57.23	57.59	58.37	56.15	55.78	55.92	56.89	60.40	63.74	63.47
10	59.77	58.55	56.97	57.82	57.87	56.26	56.08	56.85	57.12	60.16	63.63	63.41
15	59.48	58.64	56.98	58.10	57.28	56.39	55.97	57.14	57.71	60.95	63.37	62.92
20	58.83	58.79	57.00	58.27	56.87	56.00	55.66	57.14	58.25	61.43	63.39	---
25	58.93	58.27	57.15	58.63	56.44	55.54	55.35	56.87	58.97	62.38	63.51	---
EOM	58.88	57.46	57.24	58.56	56.13	54.99	55.28	56.68	59.74	63.22	64.01	62.47
WTR YEAR 1986	HIGHEST 54.83		MAR 28-29, 1986		LOWEST 64.09		AUG 29, 1986					



WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM

Month	Water Level (feet below datum)
OCT 1985	120.5
NOV 1985	119.5
DEC 1985	119.5
JAN 1986	119.5
FEB 1986	118.5
MAR 1986	118.5
APR 1986	118.5
MAY 1986	118.5
JUN 1986	120.5
JUL 1986	126.5



## SHELBY COUNTY--Continued

350735089593300. Local number, Sh:P-76.

LOCATION.--Lat 35°07'35", long 89°59'33", Hydrologic Unit 08010210, at Central Avenue and Tanglewood Street, Memphis.

Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 12 in., depth 488 ft, cased to 428 ft, screened 428 to 488 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 286.70 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of casing, 1.30 ft above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply. No record January 30 to February 26.

PERIOD OF RECORD.--October 1928 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 58.65 ft below land-surface datum, Apr. 3, 1933; lowest, 145.20 ft below land-surface datum, August 2, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	140.08	138.17	136.13	133.70	---	131.88	133.54	134.04	133.84	138.55	144.24	144.40
10	140.30	138.33	135.26	133.99	---	132.35	133.15	135.57	133.77	140.94	143.91	143.30
15	140.90	138.03	134.90	132.87	---	132.67	133.38	135.48	135.03	142.03	144.08	140.65
20	140.26	137.83	134.90	132.89	---	132.88	132.55	134.66	136.90	142.64	143.60	141.84
25	139.98	137.32	133.83	132.77	---	131.65	132.97	133.30	138.85	144.27	143.86	142.88
EOM	139.20	136.41	134.28	---	131.83	131.54	134.11	134.14	139.09	144.35	143.94	142.85

WTR YEAR 1986 HIGHEST \*131.15 MAR 24, 1986 LOWEST 145.20 AUG 2, 1986

\* May have been higher during period of missing record.



GROUND-WATER LEVELS  
SHELBY COUNTY--Continued

350900089482300. Local number, Sh:Q-1.

LOCATION.--Lat 35°09'00", long 89°48'23", Hydrologic Unit 08010210, south of Macon Road, 0.6 mi west of Germantown Road, near Memphis.

Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 384 ft, cased to 375 ft, screened 375 to 384 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 330.40 ft above National Geodetic Vertical Datum of 1929.  
Measuring point: Top of casing, 2.40 ft above land-surface datum.

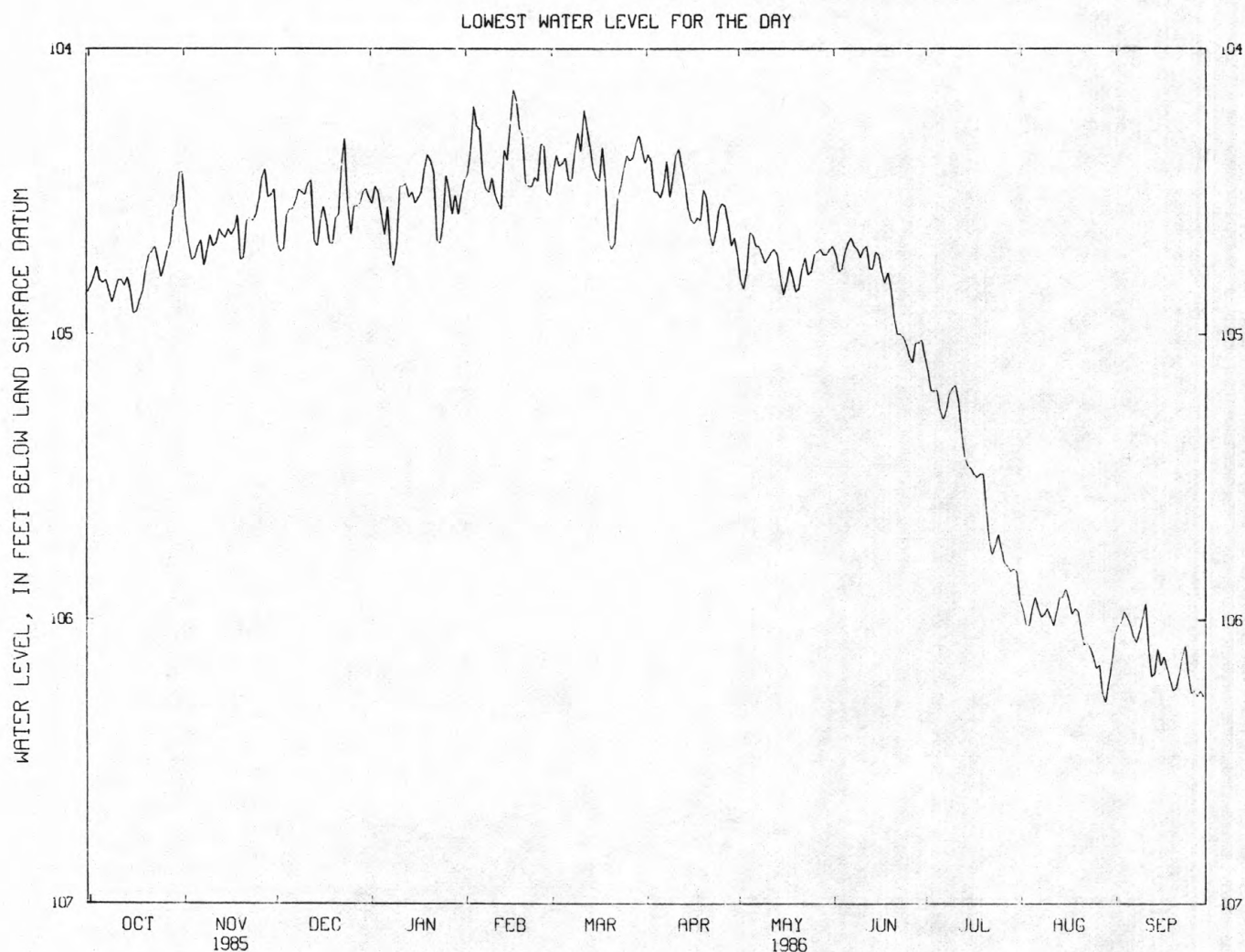
REMARKS.--Water levels affected by pumpage for Memphis municipal water supply. Records good.

PERIOD OF RECORD.--October 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 74.08 ft below land-surface datum, December 27, 1940; lowest 106.29 ft below land-surface datum, August 29, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	104.81	104.73	104.58	104.58	104.27	104.40	104.50	104.64	104.71	105.20	105.96	105.99
10	104.85	104.65	104.50	104.68	104.45	104.29	104.45	104.75	104.73	105.19	105.96	105.99
15	104.85	104.66	104.69	104.50	104.39	104.42	104.56	104.80	104.71	105.46	105.92	106.10
20	104.77	104.74	104.68	104.37	104.30	104.67	104.49	104.85	104.84	105.49	105.97	106.25
25	104.80	104.58	104.54	104.61	104.46	104.42	104.56	104.78	105.04	105.70	106.13	106.19
EOM	104.43	104.51	104.49	104.51	104.50	104.35	104.66	104.70	105.02	105.83	106.15	106.27
WTR YEAR 1986	HIGHEST 104.07			FEB 26, 1986			LOWEST 106.29	AUG 29, 1986				



GROUND-WATER LEVELS  
CRITTENDEN COUNTY, AR

299

350958090173800. Local number, Ar:C-1.

LOCATION.--Lat 35°09'58", long 90°17'38", Hydrologic Unit 08020203, 450 ft west of Highway 147, 1.3 mi north of Lehi.

Owner: Memphis Light, Gas, and Water Division, City of Memphis, and U.S. Geological Survey.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 622 ft, cased to 602 ft, screened 602 to 622 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 209 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Inside top of shelter base plate, 3.30 ft above land-surface datum.

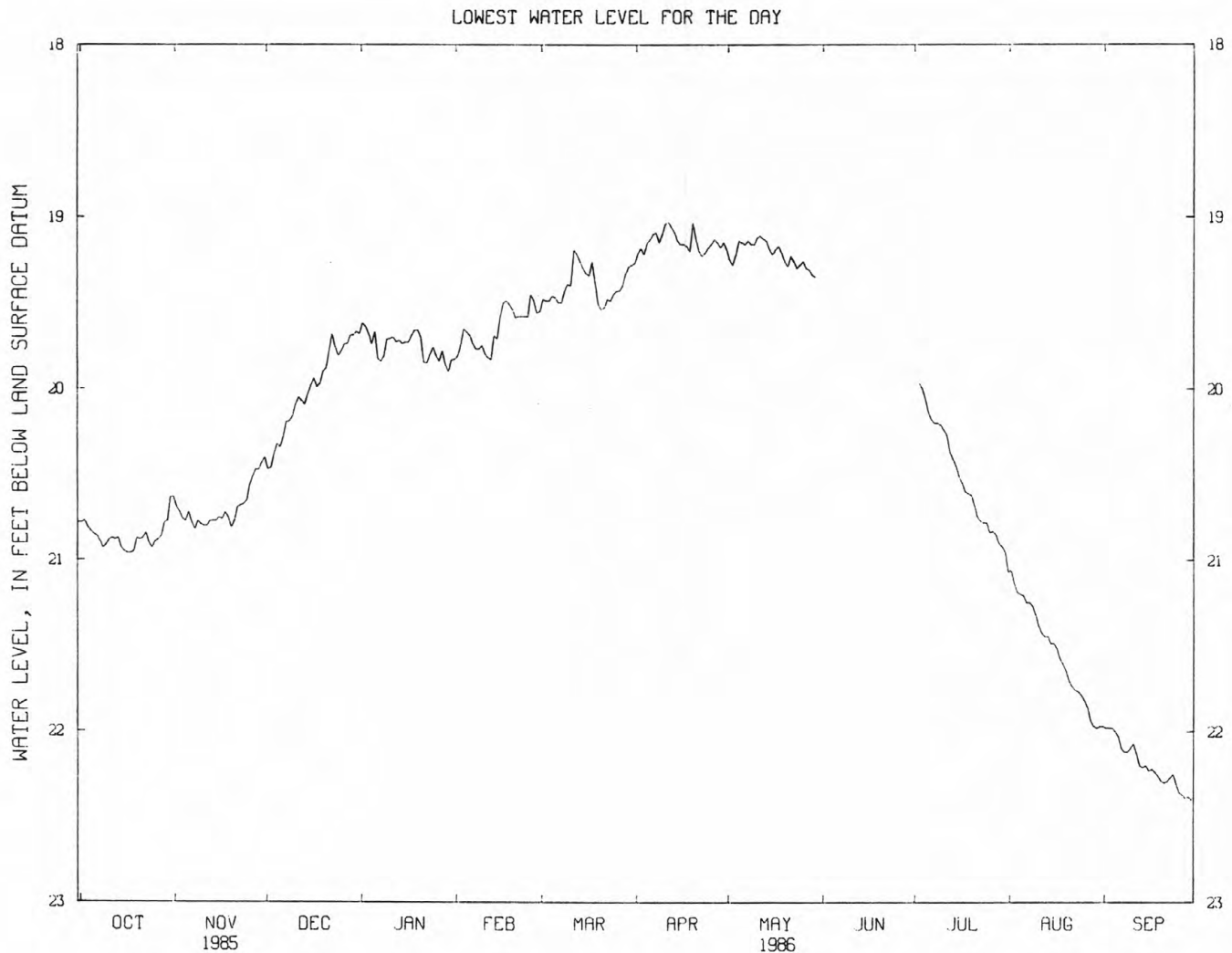
REMARKS.--Records good. No record May 31 to July 3.

PERIOD OF RECORD.--May 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.29 ft below land-surface datum, June 11, 12, 13, 1983; lowest, 22.40 ft below land-surface datum, September 30, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.83	20.77	20.32	19.74	19.67	19.46	19.15	19.14		20.06	21.20	22.00
10	20.91	20.79	20.16	19.71	19.75	19.39	19.10	19.16		20.21	21.32	22.10
15	20.93	20.77	20.03	19.74	19.71	19.30	19.14	19.19		20.45	21.49	22.20
20	20.87	20.81	19.90	19.66	19.54	19.51	19.03	19.26		20.62	21.65	22.29
25	20.93	20.65	19.81	19.76	19.58	19.45	19.18	19.28		20.78	21.79	22.31
EOM	20.63	20.43	19.67	19.83	19.56	19.28	19.15	---		20.95	21.97	22.40
WTR YEAR 1986	HIGHEST 18.96		APR 20, 1986		LOWEST 22.40		SEP 30, 1986					



350344090130000. Local number, Ar:H-2.

Owner: Memphis Light, Gas, and Water Division, City of Memphis, and U.S. Geological Survey.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 502 ft, cased to 482 ft, screened 482 to 502 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 211 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Inside top of shelter base plate, 3.30 ft above land-surface datum.

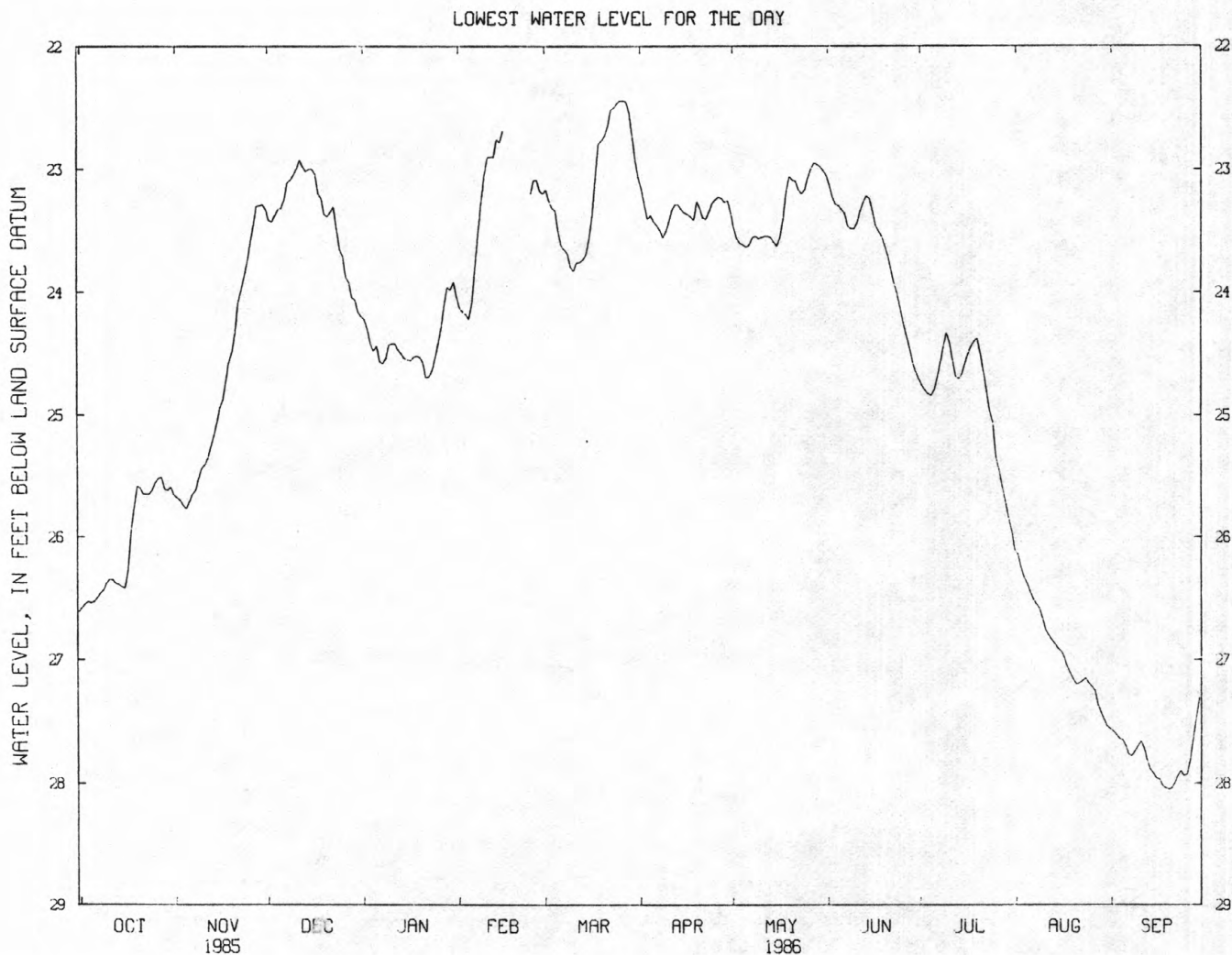
REMARKS.--Records good. No record February 17-24.

PERIOD OF RECORD.--May 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.28 ft below land-surface datum, May 30, 31, 1983; lowest, 28.05 ft below land-surface datum, September 20, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.54	25.77	23.33	24.48	24.22	23.34	23.38	23.62	23.30	24.84	26.38	27.65
10	26.38	25.44	23.05	24.43	23.04	23.80	23.51	23.57	23.49	24.33	26.66	27.70
15	26.41	25.07	23.00	24.54	22.78	23.70	23.33	23.60	23.24	24.67	26.91	27.92
20	25.58	24.49	23.37	24.53	---	22.77	23.26	23.06	23.63	24.38	27.16	28.05
25	25.61	23.76	23.66	24.53	23.20	22.46	23.28	23.17	24.13	25.06	27.19	27.94
EOM	25.59	23.29	24.16	23.92	23.18	22.92	23.26	23.01	24.65	25.95	27.54	27.31
WTR YEAR 1986	HIGHEST 22.38			MAR 26, 1986		LOWEST	28.05	SEP 20, 1986				





## CRITTENDEN COUNTY, AR--Continued

351349090062800. Local number, Ar:O-1.

LOCATION.--Lat 35°13'49", long 90°06'28", Hydrologic Unit 08020203, 0.3 mi east of blacktop road, 0.8 mi north of St. Claire.

Owner: Memphis Light, Gas, and Water Division, City of Memphis, and U.S. Geological Survey.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 497 ft, cased to 477 ft, screened 477 to 497 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 217 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Inside top of shelter base plate, 3.60 ft above land-surface datum.

REMARKS.--Records good. No record August 31 to September 3.

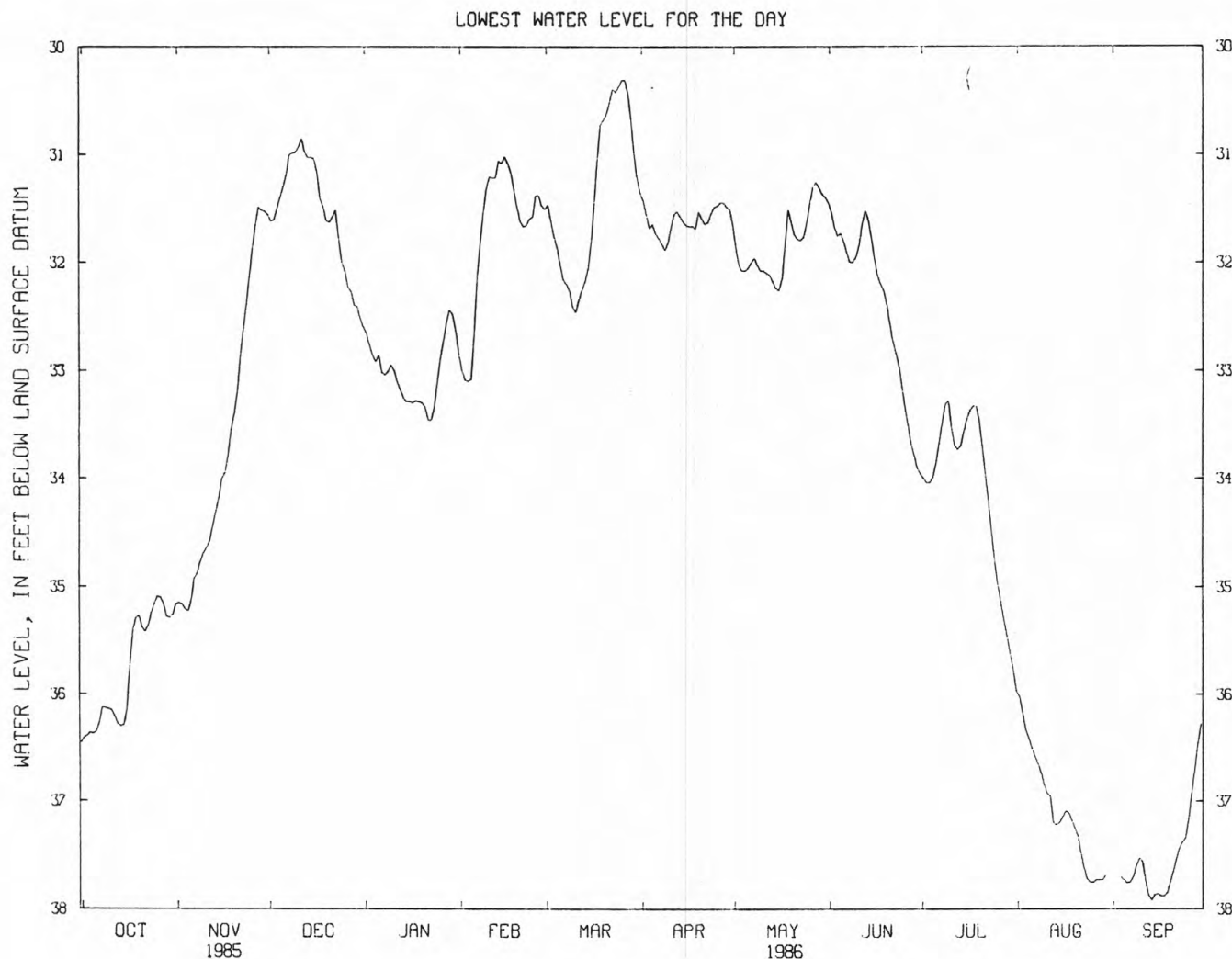
PERIOD OF RECORD.--May 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 20.42 ft, May 29, 30, 31, 1983; lowest, 37.92 ft below land-surface datum, Sept. 14, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	36.37	35.23	31.40	32.92	33.08	31.87	31.65	32.08	31.74	33.99	36.41	37.73
10	36.14	34.69	30.98	32.95	31.31	32.41	31.82	32.08	31.95	33.28	36.85	37.53
15	36.29	34.18	31.03	33.29	31.08	32.06	31.63	32.24	31.78	33.57	37.20	37.87
20	35.27	33.40	31.62	33.30	31.49	30.68	31.53	31.63	32.39	33.46	37.25	37.75
25	35.16	32.13	32.00	33.11	31.58	30.37	31.49	31.63	33.18	34.74	37.75	37.34
EOM	35.26	31.53	32.52	32.63	31.48	31.22	31.51	31.40	33.91	35.78	---	36.28

WTR YEAR 1986      HIGHEST 30.25    MAR 26, 1986      LOWEST 37.92    SEP 14, 1986



## PERIODIC MEASUREMENTS OF GROUND-WATER LEVELS

## BRADLEY COUNTY

350503084505000. Local number, Br:E-1.

LOCATION.--Lat 35°05'03", long 84°50'50", Hydrologic Unit 03150101, on Trewhitt Road, 0.5 mi north of Goodwill Road, Cleveland.  
Owner: F. G. Trewhitt.

AQUIFER.--Shale of Conasauga Group of middle and late Cambrian age.

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 36 in., depth 25 ft, casing information not available.

INSTRUMENTATION.--Periodic measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 850 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of concrete casing at land-surface datum.

PERIOD OF RECORD.--February 1950 to November 1955, April 1964 to current year. Analog record February 1950 to November 1955, April 1964 to February 1971, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.38 ft below land-surface datum, Dec. 19, 1967; lowest recorded, 24.97 ft below land-surface datum, Dec. 7, 8, 1954; highest water level measured, 8.22 ft below land-surface datum, Apr. 5, 1977; lowest measured, 23.20 ft below land-surface datum, Dec. 12, 1978.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 2	18.40	DEC 10	16.56	MAR 4	14.91	MAY 19	17.53	JUL 2	18.71

## CANNON COUNTY

354823086104400. Local number, Cn:D-1.

LOCATION.--Lat 35°48'23", long 86°10'44", Hydrologic Unit 05130203, on county road on Cannon County and Rutherford County lines, 1.5 mi south of Readyville.  
Owner: Ray Barker.

AQUIFER.--Lebanon Limestone of middle Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter, 6 in., depth 30 ft, cased with steel to unknown depth, open end.

INSTRUMENTATION.--Periodic measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 715 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing 1.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1967 to current year. Analog record April 1967 to February 1971, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.91 ft below land-surface datum, Mar. 11, 1968; lowest recorded, 19.38 ft below land-surface datum, Dec. 9, 10, 1968; highest water level measured, 12.14 ft below land-surface datum, Jan. 8, 1974; lowest measured, 18.07 ft below land-surface datum, June 27, 1980.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 8	15.47	MAR 12	14.74	MAY 9	16.24	AUG 14	16.69



## PERIODIC MEASUREMENTS OF GROUND-WATER LEVELS

## FAYETTE COUNTY

352226089330101. Local number, Fa:R-1.

LOCATION.--Lat 35°22'26", long 89°33'01", Hydrologic Unit 08010209, 80 ft south of State Highway 59, 1.2 mi southeast of U.S. Highway 70, near Braden.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Fort Pillow Sand of Wilcox Group of early Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 to 4 in., depth 1,025 ft, cased to 1,008 ft, screened 1,008 to 1,025 ft.

INSTRUMENTATION.--Periodic measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 317.50 ft above National Geodetic Vertical Datum of 1929.  
Measuring point: Top of casing, 3.70 ft above land-surface datum.

PERIOD OF RECORD.--August 1949 to current year. Analog record August 1949 to December 1970, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 64.89 ft below land-surface datum, Aug. 31, 1949; lowest recorded, 76.26 ft below land-surface datum, Dec. 5, 1970; highest water level measured, 73.61 ft below land-surface datum, Apr. 28, 1976; lowest measured, 80.25 ft below land-surface datum, Sept. 30, 1982.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 4	79.67	JAN 30	79.62	APR 2	79.53	JUN 3	79.47	AUG 4	79.62	SEP 2	79.71
DEC 31	79.49	FEB 27	79.39	MAY 1	79.52	JUL 2	79.48				

352226089330102. Local number, Fa:R-2.

LOCATION.--Lat 35°22'26", long 89°33'01", Hydrologic Unit 08010209, 80 ft south of State Highway 59, 1.1 mi southeast of U.S. Highway 70, near Braden.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 to 4 in., depth 365 ft, cased to 345 ft, screened 345 to 365 ft.

INSTRUMENTATION.--Periodic measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 317.20 ft above National Geodetic Vertical Datum of 1929.  
Measuring point: Top of casing, 4.20 ft above land-surface datum.

PERIOD OF RECORD.--October 1949 to current year. Analog record October 1949 to December 1970, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 37.25 ft below land-surface datum, Mar. 10, 1952; lowest recorded, 42.12 ft below land-surface datum, Nov. 30, 1967; highest water level measured, 39.38 ft below land-surface datum, May 2, 1980; lowest measured, 41.67 ft below land-surface datum, December 1971.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 29	40.69	JAN 30	40.77	APR 2	40.65	JUN 3	40.72	AUG 4	40.97	SEP 2	41.08
DEC 31	40.57	FEB 27	40.58	MAY 1	40.68	JUL 2	40.69				



## PERIODIC MEASUREMENTS OF GROUND-WATER LEVELS

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## SHELBY COUNTY

352112089571200. Local number, Sh:U-1.

LOCATION.--Lat 35°21'12", long 89°57'12", Hydrologic Unit 08010209, 3 mi west of Millington at Shelby Road and Shake Rag Road, Sloanville.  
Owner: Mrs. T. S. Welch

AQUIFER.--Fort Pillow Sand of Wilcox Group of early Eocene age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 24 to 16 in., depth 1,558 ft, cased to 1,497 ft, screened 1,497 to 1,558 ft.

INSTRUMENTATION.--Periodic measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 264.20 ft above National Geodetic Vertical Datum of 1929.  
Measuring point: Top of casing, 0.60 ft above land-surface datum.

REMARKS.--Water levels affected by pumpage at Millington and Memphis.

PERIOD OF RECORD.--August 1946 to current year. Analog record March 1948 to January 1971, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 35.5 ft below land-surface datum, Apr. 11, 1948; lowest recorded, 60.42 ft below land-surface datum, Dec. 20, 1970; highest water level measured, 33.20 ft, Apr. 21, 1947; lowest measured, 66.86 ft below land-surface datum, Oct. 3, 1985.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	66.86	DEC 3	65.90	JAN 29	66.28	APR 1	65.85	JUN 2	64.90	AUG 4	66.14
OCT 31	66.05	DEC 30	66.05	FEB 27	65.89	MAY 1	65.46	JUL 2	65.36	SEP 4	66.56

352112089571300. Local number, Sh:U-2.

LOCATION.--Lat 35°21'12", long 89°57'13", Hydrologic Unit 08010209, 3 mi west of Millington at Shelby Road and Shake Rag Road, Sloanville.  
Owner: Mrs. F. E. Byrd

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 18 to 12 in., depth 440 ft, cased to 360 ft, screened 360 to 440 ft.

INSTRUMENTATION.--Periodic measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 268.76 ft above National Geodetic Vertical Datum of 1929.  
Measuring point: Top of casing, 1.60 ft above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--June 1953 to current year. Analog record June 1953 to December 1970, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.59 ft below land-surface datum, June 29, 1953; lowest, 61.50 ft below land-surface datum, Sept. 4, 1986.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	59.21	DEC 3	58.46	JAN 29	59.32	APR 1	57.81	JUN 2	58.43	AUG 4	61.04
OCT 31	58.45	DEC 30	58.53	FEB 27	58.30	MAY 1	58.11	JUL 2	59.33	SEP 4	61.50

## PERIODIC MEASUREMENTS OF GROUND-WATER LEVELS

## WILLIAMSON COUNTY

355505086541100. Local number, Wm:M-1.

LOCATION.--Lat 35°55'05", long 86°54'11", Hydrologic Unit 05130204, on Horton Lane, 0.8 mi west of Carter's Creek Road, near Franklin.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Knox Dolomite of late Cambrian and early Ordovician age.

WELL CHARACTERISTICS.--Drilled artesian test well, diameter 6 in., depth 1,160 ft, cased to 473 ft, open end.

INSTRUMENTATION.--Periodic measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 712 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing 2.80 ft above land-surface datum.

REMARKS.--Period of record low resulted from water-level measurements on the well during a 72 hour aquifer test.

PERIOD OF RECORD.--January 1950 to current year. Water-level recorder December 1951 to February 1971, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 84.21 ft below land-surface datum, Mar. 10, 1952; lowest recorded 87.11 ft below land-surface datum, Sept. 10, 1970; highest water level measured, 85.43 ft below land-surface datum, Feb. 19, 1974; lowest measured, 114.81 ft below land-surface datum, Jan. 31, 1950.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 2	88.29	NOV 13	88.69	JAN 17	88.68	MAR 3	90.84
MAY 12	93.60	JUN 5	92.75	JUL 8	91.83	AUG 11	90.99

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

SHELBY COUNTY

350540090061700 - SH:J- 84

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	HARD- NESS (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
AUG 29...	180	6.60	17.0	5	77	18	7.7	8.1	18	0.4	1.0
DATE	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS AC-FT)	ARSENIC DIS- SOLVED (UG/L AS AS)	
AUG 29...	91	44	5.1	2.7	0.1	9.8	99	110	0.13	<1	
DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)	
AUG 29...	54	1	<10	<3	<10	660	<5	7	<0.1	27	

350114090071701 - SH:J-146 MLGW-DAVIS

DATE	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	HARD- NESS (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
AUG 26...	446.00	145	6.40	18.0	5	59	13	6.5	8.4	23	0.5
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS AC-FT)	ARSENIC DIS- SOLVED (UG/L AS AS)
AUG 26...	1.0	72	55	3.3	3.0	0.1	14	87	93	0.12	<1
DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)	
AUG 26...	48	<10	<10	<3	<10	290	<5	5	<0.1	25	

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

SHELBY COUNTY--Continued

350446090013500 - SH:J-154 MLGW-ALLEN

DATE	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
AUG 26...	370.00	135	6.70	18.0	5	47	11	4.8	7.8	26	0.5
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC DIS- SOLVED (UG/L AS AS)
AUG 26...	1.1	67	26	2.4	3.0	<0.1	12	82	83	0.11	<1
DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)	
AUG 26...	65	1	<10	<3	<10	650	<5	12	<0.1	30	

350518089554400 - SH:K- 73 MLGW-SHEAHAN

DATE	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
AUG 28...	273.00	200	6.20	17.0	5	65	15	6.7	14	31	0.8
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC DIS- SOLVED (UG/L AS AS)	
AUG 28...	1.0	74	91	20	7.7	<0.1	13	120	0.17	<1	
DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)	
AUG 28...	58	<1	<10	<3	<10	930	<5	170	<0.1	20	



QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

SHELBY COUNTY--Continued

350230089512301 - SH:L- 37 MLGW-LICHTERMAN

DATE	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
AUG 28...	382.00	90	5.90	17.0	5	24	5.9	2.3	8.9	43	0.8
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC DIS- SOLVED (UG/L AS AS)
AUG 28...	0.8	34	83	3.4	4.7	<0.1	13	59	60	0.08	<1
DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)	
AUG 28...		28	<1	<10	<3	<10	43	<5	2	<0.1	29

350917090012000 - SH:O-231 MLGW-MALLORY

DATE	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
AUG 29...	518.00	135	6.40	17.0	5	53	12	5.7	8.3	25	0.5
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC DIS- SOLVED (UG/L AS AS)
AUG 29...	1.0	70	54	3.0	2.3	<0.1	15	90	90	0.12	<1
DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)	
AUG 29...		66	<10	<10	<3	<10	860	<5	11	<0.1	17

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

SHELBY COUNTY--Continued

351112089585100 - SH:P-121 HOLLYWOOD DUMP

DATE	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 14...	25.00	1900	5.90	19.0	430	0	87	51	140	39	3

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 14...	36	716	1750	12	180	0.2	22	948	960	1.3

351103089585300 - SH:P-122 HOLLYWOOD DUMP

DATE	DEPTH OF WELL, TOTAL (FEET)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 15...	19.00	6.60	15.5	250	14	59	24	29	20	0.8

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 15...	9.5	232	113	19	14	0.2	18	354	310	0.48

351115089583300 - SH:P-123 USGS-MEM HWDUMP

DATE	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 13...	30.00	520	5.60	18.5	170	37	19	40	33	1

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 13...	2.8	206	1000	43	20	0.3	32	330	0.43

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JAN 13...	<10	44	110	<1	<1	<1	<1	11000	5

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
JAN 13...	<4	1400	1	10	<1	<1	210	14	28

## QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

SHELBY COUNTY--Continued

351106089581500 - SH:P-127 TVA(F)-MEMPHIS

DATE	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 10...	25.00	600	6.80	16.5	210	0	53	20	34	24	1
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WH WAT TOTAL FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	
JAN 10...	18	288	88	16	28	0.3	28	354	370	0.48	

351440089572301 - SH:P-134 MORTON WELL FIELD

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
AUG 27...	120	6.40	18.0	5	47	11	4.7	5.5	20	0.4	1.4
DATE	ALKA- LINITY WH WAT TOTAL FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC DIS- SOLVED (UG/L AS AS)	
AUG 27...	65	50	3.8	2.1	0.1	10	75	79	0.1	<1	
DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)	
AUG 27...	85	<10	<10	<3	<10	1400	<5	22	<0.1	13	

351111089585101 - SH:P-135 HOLLYWOOD DUMP

DATE	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 14...	40.00	2200	5.10	19.0	330	0	68	40	210	55	5
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WH WAT TOTAL FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	
JAN 14...	30	478	7350	9.8	280	0.1	42	1180	970	1.6	

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

SHELBY COUNTY--Continued

351103089585301 - SH:P-136 USGS-MEM HWDUMP

DATE	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 15...	49.00	420	6.90	16.0	170	0	40	17	23	22	0.8
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	

JAN 15...	6.2	206	50	25	14	0.2	19	254	270	0.35
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351116089583701 - SH:P-137 USGS-MEM

DATE	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 13...	30.00	1600	7.10	16.5	410	0	110	33	98	31	2
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	
JAN 13...	45	523	80	11	150	0.3	23	858	780	1.2	

351111089582401 - SH:P-138 USGS-MEM HWDUMP

DATE	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 09...	29.00	420	5.90	16.0	140	0	31	16	32	32	1
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	
JAN 09...	6.3	154	376	44	15	0.2	24	257	260	0.35	



QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

SHELBY COUNTY--Continued

351101089582001 - SH:P-140 USGS-MEM HWDUMP

DATE	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 10...	40.00	480	6.70	17.0	180	0	40	19	28	25	0.9
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WH WAT TOTAL FIELD MG/L AS CACO3	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	

351040089582800 - SH:P-144 HOLLYWOOD DUMP

DATE	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 16...	75.00	420	6.70	19.0	180	0	38	20	17	17	0.6
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WH WAT TOTAL FIELD MG/L AS CACO3	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	
JAN 16...	5.8	200	77	25	9.4	0.2	13	232	250	0.32	

351051089581101 - SH:P-153 HOLLYWOOD DUMP

DATE	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JAN 14...	15.0	280	0	77	22	17	11	0.5	6.0
DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	
JAN 14...	319	11	6.8	0.3	31	391	360	0.53	

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

SHELBY COUNTY--Continued

351051089581102 - SH:P-154 HOLLYWOOD DUMP

DATE	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JAN 14...	6.00	15.5	280	55	62	31	26	16	0.7	4.8
DATE	ALKA- LITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	
JAN 14...	227	440	97	10	0.3	32	402	400	0.55	

351051089581103 - SH:P-155 HOLLYWOOD DUMP

DATE	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JAN 14...	15.5	280	59	61	30	25	16	0.7	4.9
DATE	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	
JAN 14...	217	89	14	0.3	36	403	390	0.55	

351052089582802 - SH:P-157 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 16...	470	5.70	17.0	190	0	42	20	23	20	0.8
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 16...	7.3	206	796	25	12	0.2	20	268	270	0.36

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

SHELBY COUNTY--Continued

351052089582803 - SH:P-158 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 16...	310	17.5	110	22	21	13	21	30	0.9
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 16...	2.1	120	16	10	0.5	45	208	200	0.28

351050089584002 - SH:P-160 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 16...	500	6.70	17.0	210	41	46	23	27	22	0.8
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 16...	3.4	169	65	63	17	0.2	21	301	300	0.41

351050089584003 - SH:P-161 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 16...	340	6.50	17.5	110	0	23	12	27	35	1
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 16...	1.6	120	73	39	11	0.3	49	235	230	0.32

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

## SHELBY COUNTY--Continued

351109089583402 - SH:P-163 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 15...	480	5.50	17.0	170	8	35	19	37	32	1
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL MG/L AS CACO3	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 15...	3.6	158	968	56	12	0.3	42	313	300	0.43

351103089582101 - SH:P-164 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 08...	640	7.40	16.0	160	0	40	15	78	49	3
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 08...	10	273	21	33	29	0.4	25	396	390	0.54

351103089582102 - SH:P-165 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JAN 08...	750	6.90	17.5	240	50	27	49	29	1	23
DATE	ALKA- LITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	
JAN 08...	305	74	31	46	0.5	35	426	450	0.58	
DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	
JAN 08...	<10	<1	340	1	3	2	<1	5200	<5	
DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	
JAN 08...	<4	2900	3	9	<1	<1	290	9	7	



## QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

SHELBY COUNTY--Continued

351107089581901 - SH:P-167 HOLLYWOOD DUMP

DATE	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JAN 08...	7.10	17.5	290	0	68	28	47	24	1	34
DATE	ALKA- LINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	
JAN 08...	355	55	14	65	0.3	22	502	490	0.68	

351107089581902 - SH:P-168 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JAN 09...	1200	6.90	16.5	320	78	30	67	26	2	79
DATE	ALKA- LINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	
JAN 09...	547	133	16	72	0.3	27	673	700	0.92	
DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	
JAN 09...	20	<1	470	<1	<1	2	<1	1800	<5	
DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	
JAN 09...	34	1900	4	17	<1	<1	490	6	27	

351109089582701 - SH:P-170 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 09...	1350	6.70	17.0	310	0	62	37	120	43	3
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 09...	33	321	124	10	170	0.6	31	727	660	0.99

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

SHELBY COUNTY--Continued

351113089582401 - SH:P-172 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 09...	725	6.60	18.0	230	0	48	26	60	35	2
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINIT LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 09...	9.1	247	120	55	54	0.3	29	434	430	0.59

351108089584301 - SH:P-174 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 15...	720	6.50	17.0	220	0	53	22	51	32	2
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINIT LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 15...	9.1	248	152	45	47	0.4	37	410	410	0.56

351108089584302 - SH:P-175 HOLLYWOOD DUMP

DATE	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JAN 15...	17.0	280	0	64	30	60	31	2	6.1
DATE	ALKA- LINIT WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	
JAN 15...	320	44	79	0.3	35	512	510	0.7	

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

SHELBY COUNTY--Continued

351110089585001 - SH:P-177 HOLLYWOOD DUMP

DATE	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)
JAN 14...	1600	6.60	22.0	440	90	53	110	34	2	25
DATE	ALKALINITY LAB (MG/L AS CaCO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	
JAN 14...	697	339	11	140	0.2	24	836	890	1.1	
DATE	ALUMINUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM, DIS-SOLVED (UG/L AS CD)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	
JAN 14...	10	1	890	1	<1	<1	<1	14000	5	
DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELENIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	VANADIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	
JAN 14...	8	2000	2	5	<1	<1	610	25	41	

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

SHELBY COUNTY--Continued

351113089583401 - SH:P-179 HOLLYWOOD DUMP

DATE	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)
JAN 14...	6.70	14.0	160	4	32	19	40	35	1	1.7	154
DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)
JAN 14...	60	60	19	0.3	34	311	300	0.42	10	<1	69
DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)
JAN 14...	<1	<1	<1	20	21	12	6	79	<1	3	1
DATE	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	PER- THANE TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	
JAN 14...	<1	180	2	44	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	
DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PCB, TOTAL (UG/L)	
JAN 14...	<0.01	<0.01	<0.01	<1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	

351108089581301 - SH:P-181 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 10...	550	6.70	16.5	190	0	43	21	34	27	1
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WH WAT TOTAL MG/L AS CACO3	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 10...	5.5	204	79	21	42	0.2	20	309	310	0.42



## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

## SHELBY COUNTY--Continued

## 351108089581302 - SH:P-182 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JAN 10...	380	6.70	17.5	160	39	14	20	22	0.7	2.9
DATE	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	
JAN 10...	162	63	16	11	0.3	26	226	230	0.31	
DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	
JAN 10...	<10	<1	230	<1	<1	<1	2	2900	<1	
DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	
JAN 10...	<4	2600	1	<1	<1	<1	150	3	11	

## 351114089582001 - SH:P-183 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 10...	1500	6.80	17.0	420	0	95	45	120	36	3
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 10...	29	528	162	9.7	150	0.2	22	854	790	1.2

## 351115089584201 - SH:P-184 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 15...	1680	6.70	15.0	350	0	73	40	120	41	3
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 15...	28	376	145	12	170	0.2	25	772	690	1.0

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

## SHELBY COUNTY--Continued

## 351115089584202 - SH:P-185 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JAN 15...	1630	7.20	14.5	370	77	43	140	45	3	3.1
DATE	ALKA- LINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	
JAN 15...	637	78	11	190	0.2	29	864	890	1.2	
DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	
JAN 15...	80	2	1700	<1	<1	<1	<1	12000	<5	
DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	
JAN 15...	6	5000	2	8	<1	<1	600	24	15	

## 351123089584001 - SH:P-186 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 16...	560	6.70	16.0	200	0	41	23	25	21	0.8
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WH WAT TOTAL FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 16...	4.4	266	103	5.2	10	0.4	21	299	290	0.41

## 351123089584002 - SH:P-187 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 16...	520	6.70	15.0	250	0	68	20	3.9	3	0.1
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WH WAT TOTAL FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 16...	3.7	268	104	3.7	3.1	0.2	21	284	280	0.39

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

## SHELBY COUNTY--Continued

## 351111089585201 - SH:P-188 HOLLYWOOD DUMP

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
JAN 15...	1400	7.60	21.0	300	0	69	32	140	48	4
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 15...	17	509	25	48	57	0.3	38	876	710	1.2

## 351109089512901 - SH:Q- 40

DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
AUG 27...	120	6.20	17.5	5	41	9.4	4.2	8.2	30	0.6	1.0
DATE	ALKA- LINITY WH WAT TOTAL FIELD MG/L AS CACO3	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC DIS- SOLVED (UG/L AS AS)	
AUG 27...	53	64	6.1	2.1	<0.1	12	72	76	0.1	<1	
DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)	
AUG 27...	73	<1	<10	<3	<10	1300	<5	19	<0.1	44	

## 351703089575301 - SH:U- 20 GRACE CHEMICAL

DATE	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
AUG 27...	551.00	270	6.60	18.0	5	130	28	15	9.3	13	0.4
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WH WAT TOTAL FIELD MG/L AS CACO3	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC DIS- SOLVED (UG/L AS AS)
AUG 27...	2.3	159	77	2.9	2.0	0.1	9.5	156	170	0.21	<1
DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)	
AUG 27...	320	1	<10	<3	<10	5200	<5	87	<0.1	19	





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GAGING STATION TENNESSEE RIVER AT CHATTANOOGA,  
period of record 1874 to present.





## FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	$2.54 \times 10^1$	millimeters (mm)
	$2.54 \times 10^{-2}$	meters (m)
feet (ft)	$3.048 \times 10^{-1}$	meters (m)
miles (mi)	$1.609 \times 10^0$	kilometers (km)
<i>Area</i>		
acres	$4.047 \times 10^3$	square meters (m <sup>2</sup> )
	$4.047 \times 10^{-1}$	square hectometers (hm <sup>2</sup> )
	$4.047 \times 10^{-3}$	square kilometers (km <sup>2</sup> )
square miles (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometers (km <sup>2</sup> )
<i>Volume</i>		
gallons (gal)	$3.785 \times 10^0$	liters (L)
	$3.785 \times 10^0$	cubic decimeters (dm <sup>3</sup> )
	$3.785 \times 10^{-3}$	cubic meters (m <sup>3</sup> )
million gallons	$3.785 \times 10^3$	cubic meters (m <sup>3</sup> )
	$3.785 \times 10^{-3}$	cubic hectometers (hm <sup>3</sup> )
cubic feet (ft <sup>3</sup> )	$2.832 \times 10^1$	cubic decimeters (dm <sup>3</sup> )
	$2.832 \times 10^{-2}$	cubic meters (m <sup>3</sup> )
cfs-days	$2.447 \times 10^3$	cubic meters (m <sup>3</sup> )
	$2.447 \times 10^{-3}$	cubic hectometers (hm <sup>3</sup> )
acre-feet (acre-ft)	$1.233 \times 10^3$	cubic meters (m <sup>3</sup> )
	$1.233 \times 10^{-3}$	cubic hectometers (hm <sup>3</sup> )
	$1.233 \times 10^{-6}$	cubic kilometers (km <sup>3</sup> )
<i>Flow</i>		
cubic feet per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liters per second (L/s)
	$2.832 \times 10^1$	cubic decimeters per second (dm <sup>3</sup> /s)
	$2.832 \times 10^{-2}$	cubic meters per second (m <sup>3</sup> /s)
gallons per minute (gal/min)	$6.309 \times 10^{-2}$	liters per second (L/s)
	$6.309 \times 10^{-2}$	cubic decimeters per second (dm <sup>3</sup> /s)
	$6.309 \times 10^{-5}$	cubic meters per second (m <sup>3</sup> /s)
million gallons per day	$4.381 \times 10^1$	cubic decimeters per second (dm <sup>3</sup> /s)
	$4.381 \times 10^{-2}$	cubic meters per second (m <sup>3</sup> /s)
<i>Mass</i>		
tons (short)	$9.072 \times 10^{-1}$	megagrams (Mg) or metric tons



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